

This Old House

Smarten up!

5 kits for a safer,
more secure, more
convenient home

Build a tree fort
Stamp a wall
Hang a ceiling fan
Put up shelves
Raise a barn

*This light is
a camera*



A beagle dog with brown and white fur is shown in profile, looking upwards. It wears a blue collar with a tag that says "BLUE". In the background, a white propane delivery truck is parked on a grassy area. The truck has "PROUDLY PROPANE" written on its side. The scene is set outdoors under a clear blue sky.

"PROPANE. IT'S MAN'S BEST FUEL."

Making my rounds filling propane tanks with the person who feeds me, I've learned a few things. Like how propane is a clean, reliable, and efficient energy source. It also fuels some great outdoor living (and I should know about outdoor living).

Learn more at proudlypropane.com

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A comfortable home is a happy home. That's why thousands of families choose Fujitsu for whisper-quiet, energy-efficient cooling. Climate systems. These sleek wall-mounted units require no ductwork and allow for flexible room-by-room temperature control. And with invisible filters, they're the simple choice for clean, quiet, comfortable home comfort.



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on the cover



Cover: Photography by RUST SEA
Styling: JACQUELINE BROWN



Early access on tablet!

Now you can download the latest issues of *TOH* on your tablet before the print issue is available. Go to thisoldhouse.com/tablet

PHOTO: JACQUELINE BROWN

It's a great day to stain the deck.



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Apply down to 35° F.



Mix and apply in just 10 minutes.



Ready to go in 4 hours.



Introducing Olympic® Maximum® stain with Weather-Ready™ Application.

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Available at **LOWE'S**



Available with use for look. The product name is OLYMPIC Maximum. OLYMPIC Maximum is a registered trademark of The Home Depot, Inc. and is used under license. OLYMPIC Maximum is a registered trademark of The Home Depot, Inc. and is used under license. © 2016 The Home Depot, Inc. All Rights Reserved.



History In the Making

The TOH crew has been busy at the Belmont project house, taking care to preserve its rich history while updating it for modern living. Tune in to see the incredible transformation!



AIRING NOW ON **TBS**

Check local listings or stream at thisoldhouse.com/watchTOH
Join the conversation **#TOHBelmont**

This Old House is the proud recipient of the 2015-2016
Daytime Emmy Award for Outstanding Lifestyle Program

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This Old House

Letter FROM TOH



A beloved old house changes hands

I don't think you ever actually own an old house. You purchase it, yes, and you move in and you stay for a while—sometimes a long time, sometimes a shorter one. But mostly, you act as a caretaker. That house had a history before you ever showed up.

And so it is with *This Old House*—the magazine, the television show, and the website. On April 1, all of *This Old House* changed hands. It was sold by Tune, Inc. to *This Old House Ventures, LLC*, a limited liability corporation helmed by CEO Eric Thorkelson. And for Eric, it was a homecoming of sorts.

Eric was the first president of *This Old House* when the magazine launched in May 1996. The idea for the magazine was his—just as the idea to acquire it was, more than 20 years later. He invited me to join him in this adventure, and we're off.

Like any new residents of an old house, we have some plans. The first is to do no harm to the good and solid structure that has been built, year over year, since the original show premiered in 1979. *This Old House* is a great old house, which is why we're so happy to be here.

But as the theory that even a good thing can be better, you'll see us making a few changes in the coming months. First up will be a new and greatly improved digital experience, optimized for mobile users. We've already made a few subtle tweaks to the design of the magazine, and there will be more of that to come, too, in the form of richer, more modern type faces.

What we aren't planning is a full-on renovation. Here at the magazine, we like to think of what we're doing more as restoration—of its original promise as the go-to destination for all of us who love old houses.

So come along with us as we wander in and out of the rooms, open the windows, and let in some fresh air. We're thrilled to be the new caretakers of this great house. I hope you'll be watching, and reading, and that you will let us know, as New York City's former mayor Ed Koch used to say, how we're doing.



Eric Thorkelson
CEO, *This Old House Ventures*

ADRIAN WYLAND
EDITOR-IN-CHIEF
www.thisoldhouse.com

Struggling to lower your high LDL cholesterol?
It may be time for PRALUENT® (alirocumab).

When diet and the highest tolerated dose of a statin are
not enough, adding PRALUENT could make it PLUNGE.

PRALUENT is different than a statin, and is for adults with uncontrolled LDL (bad) cholesterol who have heart problems due to plaque build-up in the arteries, or who have HeFH*

- In clinical studies of patients with heart problems due to plaque in the arteries or with HeFH* who were not at their LDL cholesterol goal despite being on the highest tolerated dose of a statin, adding PRALUENT to a statin reduced high LDL cholesterol an additional **44%-58%**, on average.
- So if diet, exercise, and statins haven't been enough to get your LDL cholesterol to where it needs to be, talk to your doctor about adding PRALUENT.

PRALUENT is covered by most health insurance and Medicare plans†

What is PRALUENT (alirocumab)?

PRALUENT is an injectable prescription medicine called a PCSK9 inhibitor. PRALUENT is used along with diet and maximally tolerated statin therapy in adults with heterozygous familial hypercholesterolemia (an inherited condition that causes high levels of LDL) or atherosclerotic heart problems, who need additional lowering of LDL cholesterol.

The effect of PRALUENT on heart problems such as heart attacks, strokes, or death is not known.

Safety and efficacy in children is unknown.

Important Safety Information for PRALUENT
Do not use PRALUENT if you are allergic to alicumab or to any of the ingredients in PRALUENT.

Before starting PRALUENT, tell your healthcare provider about all your medical conditions, including allergies, and if you are pregnant or plan to become pregnant or if you are breastfeeding or plan to breastfeed.

Tell your healthcare provider or pharmacist about any prescription and over-the-counter medicines you are taking or plan to take, including natural or herbal remedies.

PRALUENT can cause serious side effects, including allergic reactions that can be severe and require treatment in a hospital. Call your healthcare provider or go to the nearest emergency room right away if

you have any symptoms of an allergic reaction, including a severe rash, redness, severe itching, a swollen face, or trouble breathing.

The most common side effects of PRALUENT include redness, itching, swelling, or pain/tenderness at the injection site, symptoms of the common cold, and flu or flu-like symptoms. Tell your healthcare provider if you have any side effect that bothers you or that does not go away.

Talk to your healthcare provider about the right way to prepare and give yourself a PRALUENT injection and follow the "Instructions for Use" that comes with PRALUENT.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.


Praluent®
(alirocumab) Injection 75mg/0.5mL, 150mg/1mL
THE FALL OF HIGH CHOLESTEROL

Not an actual patient.
Individual results may vary.

To learn more, call 1-844-PRALUENT (1-844-772-5636) or visit PRALUENT.com/TOH

Please see Brief Summary of Prescribing Information on the next page.

SANOFI  REGENERON

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*Heterozygous familial hypercholesterolemia.
†Outstanding data are provided by Pharos and Phospho Insight & Technology, LLC (PHIT) and are current as of February 2016. Insurance formularies do change and many health plans offer more than one formulary; please check directly with the health plan to confirm coverage.

Summary of information about PRALUENT (alsocumab) (PRAL-uent) injection, for Subcutaneous Injection	Rx Only
What is PRALUENT? PRALUENT is an injectable prescription medicine called a PCSK9 inhibitor. PRALUENT is used along with diet and maximally tolerated statin therapy in adults with heterozygous familial hypercholesterolemia (an inherited condition that causes high levels of LDL) or atherosclerotic heart problems who need additional lowering of LDL cholesterol. The effect of PRALUENT on heart problems such as heart attacks, stroke, or death is not known. It is not known if PRALUENT is safe and effective in children.	
Who should not use PRALUENT? Do not use PRALUENT if you are allergic to alsocumab or to any of the ingredients in PRALUENT. See the end of this Summary of Information for a complete list of ingredients in PRALUENT.	
What should I tell my healthcare provider before using PRALUENT? Before you start using PRALUENT, tell your healthcare provider about all your medical conditions, including allergies, and if you: <ul style="list-style-type: none"> are pregnant or plan to become pregnant. It is not known if PRALUENT will harm your unborn baby. Tell your healthcare provider if you become pregnant while taking PRALUENT. are breastfeeding or plan to breastfeed. You and your healthcare provider should decide if you will take PRALUENT or breastfeed. You should not do both without talking to your healthcare provider first. Tell your healthcare provider or pharmacist about any prescription and over-the-counter medicines you are taking or plan to take, including alcohol or herbal products.	
How should I use PRALUENT? <ul style="list-style-type: none"> See the detailed "Instructions for Use" that comes with Praluent about the right way to prepare and give your PRALUENT injection. Use PRALUENT exactly as your healthcare provider tells you to use it. PRALUENT comes as a single dose (1 time), pre-filled pen (autoinjector), or as a single-dose pre-filled syringe. Your healthcare provider will prescribe the type and dose that is best for you. If your healthcare provider decides that you or a caregiver can give the injections of PRALUENT, you or your caregiver should receive training on the right way to prepare and administer PRALUENT. Do not try to inject PRALUENT until you have been shown the right way by your healthcare provider or nurse. PRALUENT is given as an injection into the skin (subcutaneous) 1 time every 2 weeks. Do not inject PRALUENT together with other injectable medicines at the same injection site. Always check the label of your pen or syringe to make sure you have the correct medicine and the correct dose of PRALUENT before each injection. If you forget to use PRALUENT or are not able to take the dose at your regular time, inject your missed dose as soon as you remember, within 7 days of your missed dose. Then use your next dose 2 weeks from the day you missed your dose. This will put you back on your original schedule. If the missed dose is not given within 7 days, wait until your next scheduled dose to re-start PRALUENT. This will keep you on your original schedule. If you are not sure when to re-start PRALUENT, ask your healthcare provider or pharmacist. If you take more PRALUENT than you should, tell to your healthcare provider or pharmacist. Do not stop using PRALUENT without talking with your healthcare provider. If you stop using PRALUENT, your cholesterol levels can increase. 	
What are the possible side effects of PRALUENT? PRALUENT can cause serious side effects, including: <ul style="list-style-type: none"> allergic reactions. PRALUENT may cause allergic reactions that can be severe and require treatment in a hospital. Call your healthcare provider or go to the nearest hospital emergency room right away if you have any symptoms of an allergic reaction including a severe rash, redness, swelling, a swollen face, or trouble breathing. The most common side effects of PRALUENT include: infection, itching, swelling, or pain/tenderness at the injection site, symptoms of the common cold, and flu or flu-like symptoms. Tell your healthcare provider if you have any side effect that bothers you or that does not go away. You are not at all of the possible side effects of PRALUENT. Ask your healthcare provider or pharmacist for more information. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.	
General information about the safe and effective use of PRALUENT. Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use PRALUENT for a condition for which it was not prescribed. Do not give PRALUENT to other people, even if they have the same symptoms that you have. If you have these: <ul style="list-style-type: none"> This is a summary of the most important information about PRALUENT. If you would like more information, talk with your healthcare provider. You can ask your pharmacist or healthcare provider for information about PRALUENT that is written for health professionals. For more information about PRALUENT, go to www.PRALUENT.com or call 1-844-PRALUENT (1-844-774-5238). 	
What are the ingredients in PRALUENT? <ul style="list-style-type: none"> Active ingredient: alsocumab Inactive ingredients: histidine, polyisobutyl 20, sucrose, and water for injection. 	
Manufactured by: sanofi-sintelabo U.S. LLC, Bridgewater, NJ 08807, A SANOFI COMPANY, (U.S. license # 1752, Manufactured by: sanofi-sintelabo U.S. LLC, (U.S. license # 1752) and the parent, Pharmazentrum, (the "PRALUENT") PRALUENT is a registered trademark of Sanofi / Glaxo.	

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ALU-PP-16-OCT15

home solutions

Edited by Deborah Poole

INSIDE MOSQUITO HUNTING VACAY ART GRILL PREP SUN BLOCKERS MORE



Summer centerpiece

Succulents thrive on bright sun and benign neglect, two things you'll find during the hot, busy days of summer. This arrangement of about a dozen succulents, including a variety of cacti, is a centerpiece that works well on a rustic outdoor table. A vintage chicken feeder placed from a fly requires only a string of holes to hang from a fence or post. A bag of organic soil, and a topping of pebbles. About with a colorful color and texture, this living tabletop accessory is practical, self-sustaining, and a must-have for your garden.

↑
The central small white container holds a small white object.

Banish skeeter hangouts

America's least-favorite insect breeds in secret hot spots near where you live. Hunt them down, empty them out, and spread the word! Baiting back these border-crossing brats is best done by you and your neighbors.



THE Zika VIRUS'S SLOW MARCH is forcing homeowners in many areas to do more than swat and curse. Think prevention, not just cure. Some of the same mosquito species that carry diseases are also responsible for spreading Zika. To keep mosquitoes out of the house, screen not only doors and windows but also any vent or other opening. Keep screens patch-free (see below) and hand—and don't forget to pack if you're heading for a summer rental.

1 PLANT SAUCERS
Indoors and out, watch for pooling water.

2 LANKY FRUITS
That stinky, deep-dish adds up to a mosquito-friendly puddle.

3 CUTTERS
A not-long trough packed with sticks and leaves is the mosquito equivalent of a nest carpet. Trim branches that hang over gutters, and check regularly for any debris.

4 RAIN BARRELS
Standing water is mosquito-friendly. Cap all containers, or never fill them with free fluids.

5 LAWN TRIMMING AND LOW FOLIAGE
Dispose of leaves and grass cuttings before they turn into mosquito pits. Low-lying shrub branches provide damp, welcome

shade for mosquitoes, after a rainstorm, spray a fast-and-filthy product on the undersides of leaves.

6 TOYS AND DISHES
Insect-loving buckets and pet bowls can harbor mosquitoes after a rainfall. Turn them sunny-side-down; eggs may survive if you wait till later.

7 TARPS AND COVERS
Those water-filled funnels work well as a mosquito maternity ward.

8 TILES
Mosquitoes travel the world inside dark, dank rubber boots. Keep these waterlogged boots out of your yard and garage.

9 TREE HOLLOWDS
Plug holes with sand, or mortar. Maybe new public safety No. 5 will finally get the message.

10 METAL Unroll a few strands of wire from all sides of a pre-cut patch. Bend the wire ends at a 90° angle, poke them through the screen, and flatten them.

HOW TO

PATCH SCREEN HOLES

Pre-cut patches can be matched to the existing screen and trimmed to fit.



1 NYLON/FIBERGLASS
Use clear adhesive to put up a patch or buy a pre-cut adhesive patch and fill by applying pressure on both sides of the screen.



Armchair travel

Breathtaking water, awe-inspiring rock formations, and redwoods that kiss the sky—it's no wonder the majestic imagery in these 1930s WPA posters sparks wanderlust. Originally designed to promote tourism, they are celebrated today for their artistry. To create this display, we downloaded three images from the Library of Congress (for gov't pictures) onto a zip drive and asked a copy shop to enlarge them to fit two standard-size frames (18 by 24 inches and 12 by 18 inches) and mats. It's an eye-catching way to document vacations or that cross-country trip you plan to take, not to mention celebrate the National Park Service's 100th anniversary on August 25. —MICHELLE BOWEN



Graft stores sell frames for as little as \$100 or custom on a custom job—the art after all was produced free.

When it's hot, water wisely

When temperatures soar, so does the stress on plants. But flooding soil isn't the answer—once it's saturated the soil is sealed as much. Here are smarter ways to irrigate in summer.

TREES AND SHRUBS Trees with less than two years in the ground need extra care. Keep the top 12 inches of soil moist and add a ring of mulch about 12 inches from the trunk to reduce evaporation. Mature trees can often hold their own, but during arid stretches water twice a week for about 40 minutes with a soaker hose just past the canopy's edge, or drip line, watering at the trunk. As soon as I help the water reach, which are in the top 12 to 18 inches near the drip line. Check for signs of thirst—flowered and leaves drooping and curl when plants have to divert energy to their roots.

LAWN Encourage grass to look deep by watering less frequently—just twice a week, about 1/2 inch at a time. On empty time, a deep water is a helpful measure. In peak heat let the blades go brown and dormant; they'll bounce back in cooler temps. If the drought lasts longer than four weeks, water until the top 5 inches of soil are moist. As always, keep grass 4 inches high and water when the sun is low. —SAL VAGLICA



Proper grill prep

Cooking over coals is a rite of summer, and by now your grill grate is probably less than pristine. Bust through the blackened buildup with these tips.



▲ new brush works twice as fast, keeping you cooking.

Tip #1: Use the right tool

While the grate is still hot, dislodge crusty patches with a stiff wire-bristle brush, such as the Weber Stainless-Steel Grill Brush (\$32, amazon.com), or, in a pinch, a piece of folded-up aluminum foil.

A word of warning: Wire brushes take a beating from frequent use and even being left out in the rain. Bristles can dislodge and stick to grates, where they may adhere to food and pose a health threat. Inspect your brush regularly, and try this simple test: Put on a bristle and pulling up a blade of grass, if it comes loose, you need a new brush. Ditto if the head is split or warped, which can lead to loose bristles.

Tip #2: Try vinegar or steam

Fill a spray bottle with equal parts vinegar and water, coat the grate, and let it sit for an hour. The solution reduces sooty oil caked with

brush or crumpled foil—no need for heat. If the grate is hot, use a handheld steamer, such as Grill Daddy (\$17, amazon.com), which shoots water through a stainless-steel brush, preventing grime that clings to you or your

Tip #3: Treat it like a pan

Still have caked-on BBQ sauce? Try a pet-friendly cleanser polisher like Bar Keepers Friend (\$1.50, barnesandnoble.com), which uses oxalic acid—found in rhubarb leaves—to soften up burnt-on bits. Rinse thoroughly and let dry.

Tip #4: Next time, oil first

To prevent food from sticking and becoming charred residue later, scrub down the grate with long strips of paper towel dipped in cooking oil. Choose an oil with a high smoke point, such as safflower, canola, or sunflower, so it can stand up to heat. —M.E.

GEAR FOR GRILL GEEKS

Worry less, party more at your next BBQ with these handy problem-solvers.



CORN STABILIZER

This device holds same-size ears and keeps hands away from the fire. Corn Grill Stabilizer, \$17, craigslistbarnes.com

PERFORMANCE GLOVES
Flame barriers made from BPA-free silicone can handle up to 447°F. Firecrazer, \$12, amazon.com



SMALL-STUFF SANDER

This pan delivers grill marks with a neat dropping sliced peppers (or potatoes) into the flames. Pro Ceramic Grill Pan, \$30, suitable.com



FISH FLIPPER

Sturdy and well-balanced, this stainless-steel spatula can flip a fillet with finesse. Charcoal Companion Angler Fish, \$16, amazon.com



Fight fading

It's great to have all that sunshine, but UV rays can do a number on your soft goods. Here's how to lessen the impact.

> MIND YOUR MATERIALS

Natural fibers like linen, cotton, and silk are particularly vulnerable to sun bleaching, so choose furnishings—rugs, flooring, furniture, curtains—made from synthetics or blends. Darker colors like navy or charcoal also absorb more UV rays and thus fade more rapidly than lighter hues. UV-repelling sprays exist but must be applied with care and may not completely prevent fading.

> MOVE THINGS AROUND

When choosing and arranging furniture, again keep in mind that certain materials will deteriorate faster than others in the sunlight. To even out the fading of wood floors and rugs, rotate the rugs at least once a year.

> BLOCK THE LIGHT

Even curtains that are lined, or have separate liners, won't do double duty as room darkeners. A layer of sheer under curtains can help filter light. Or consider acrylic-thin window film, applied by pros, which can block UV rays with virtually no distortion in the glass. Installation isn't cheap but may pay off over time in lower heating and cooling costs—and replacement furnishings.

—JENNIFER LANGE

Oscar Mayer

With 100% Angus, you'll need to beef up your grill security.



Oscar Mayer Premium Beef Hot Dogs are now made with 100% Angus beef for a taste the whole family will enjoy.



Checklist

Easy ways to improve your home

6 FAST FIXES

❑ **Clean beverage coolers:** Wipe down the interior with warm, soapy water, let dry with the lid open. To remove odors, use white vinegar instead.



❑ **Adjust staked plants:** As flowers and climbing vines mature, trim trailing vines and add more as needed. Loosely tie the area around stakes at a 45-degree angle and then loosely wrap the plant to prevent damage.

❑ **Deadhead annuals:** To trick plants into producing another round of blooms, remove them going to seed. Snip off spent flowers where they connect to leaves to prevent rot.

❑ **Save on A/C:** Use counter-top owners for small units to reduce air conditioning costs and keep the kitchen cooler.

❑ **Bug-proof travel gear:** After vacationing, wash all clothing in hot water. Vacuum and inspect suitcases before storing them away.

❑ **Trim back hedges:** Keep plants cut down to 2 feet or less to increase visibility and decrease the chance of thieves taking cover.

❑ **Protect tomatoes during a heat wave:** Temperatures that top 80°F at night and 90°F during the day slow down the ripening process; tomatoes may continue to develop a deceptive red hue while remaining green inside. If a period of intense heat occurs, set up a shade blanket—this will also shield against sunscald—or pick tomatoes and allow them to finish ripening indoors in a more stable environment.



TOH TIP

❑ **Update insurance records:** With hurricane season upon us, it's helpful to have "before" photos of your house so the event can be used to make an insurance claim. Take a video or photos of your house, inside and out. For major items like appliances, photograph the serial numbers. For outdoor, document the exterior, as well as structures such as a gazebo or swimming pool.

❑ **Clean up hardscaping:** Take time this month to clean up outdoor spaces. Pull weeds growing between pavers, to make easier work of ridding these leaves and killing the roots, carefully pour a bottle of hot water on them first. Because

they don't return by drought or dryness from the cracks with an air compressor. Patch any concrete cracks in concrete or asphalt to prevent weeds from growing back.



❑ **Thwart ants:** The six-legged invaders you spy indoors represent only a fraction of the colony, so you need to employ a variety of controls. Try laying a trail of cayenne pepper and instant grits near openings to discourage entry, and set up bait traps so they'll carry the pesticide inside back to the nest. Since ants are attracted to moisture as well as food, use a dehumidifier in damp spaces and get rid of standing water outdoors.



PHOTOS COURTESY OF THE U.S. DEPARTMENT OF AGRICULTURE



SKOAL
A PINCH BETTER

SINCE 1900

SMOKELESS TOBACCO AVAILABLE AT SKOAL.COM

WARNING: Smokeless tobacco is addictive.

*See SKOAL SKOAL'S website for more information.

SMOKELESS TOBACCO

The tub sits under the new windows. Banked by built-in flut creates a natural nook. The outside millwork and the tub itself are painted the same warm white for a cohesive look. Shelves and windows harmonize with the floor. Paint (wall and built-in): Fine Paints of Europe's Affresco.

PERIOD FLAIR
Find more vintage style ideas for your bath remodel at www.finepaintsofusa.com



Three of the broadboard walls are painted in a warm white and register near the shower adjacent built-in flut (left). Fine Painted Europe's Affresco.



before

The long, narrow view had a sloped ceiling, no shower, and a tub sitting in the middle of the room.



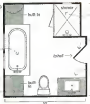
after

A custom bumpout raised the ceiling and replaced the square footage for a more functional layout and storage.

1. Dropped out the exterior wall by about 3 feet and put in a shed door, which added two windows.

2. Repurposed the wall from tub by building a custom surround for it.

3. Gave 6 feet back to bathroom door. Banked the tub with cabinet &



4. Added a generous freestanding shower in one corner.

5. Moved the doorway leading to the hall closer to the center of the space.

6. Swapped sink and toilet spots and exchanged a pedestal for a vanity cabinet.

*Showerhead is a standard with Delta In2ition® plus H2Okinetic®. To learn more about this integrated showerhead and handshower, visit deltafaucet.com/in2ition

FOR THE STICKY
AND THE STICKY.



Experience 3X the coverage of a standard showerhead* with Delta In2ition® plus H2Okinetic®. To learn more about this integrated showerhead and handshower, visit deltafaucet.com/in2ition



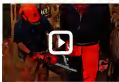
Need expert advice?

TOH video to the rescue!

See the TOH crew in action!



> Hang a kitchen wall cabinet



> Practice chainsaw safety



> Install a rain gutter



> Maintain overgrown perennials

Find **1,000** more projects (*really!*) at
thisoldhouse.com/video

Decorative shelf brackets

Inspired by Victorian-era designs, these metal supports add instant charm to open shelving. BY KATELIN HILL • PHOTOGRAPHS BY ANDREW MICAL

ONCE A HANDWROUGHT luxury item, ornate metalwork became scarce here in all after the Civil War, as the economy boomed and the mass manufacture of decorative hardware hit its stride. By the late 19th century, elaborately detailed brackets made of cast iron or brass camead up in houses supporting everything from wall-hung sinks to library shelves. Catalogs from the period featured a wide range of styles that reflected the over-the-top Victorian aesthetic. These days, as more homeowners opt for open shelving in kitchens and baths, reproduction-style brackets are enjoying a resurgence.

Here, 12 of our favorite options



1. Loop and tie

Size: 9 1/2" D x 12 1/2" H

Made of: Powder

coated steel, 100

Highlight: This simple

eye-and-foot design

could suggest a

medieval room, 120,

shopatthisoldhouse.com

2. Nature theme

Size: 7 1/2" D x 11 1/2" H

Made of: Cast iron

with a patina finish

Highlight: Form and

function are subtly

weathered patina

but how it looks

hard to miss, 100,

3. Scrollwork

Size: 10 1/2" D x 11 1/2" H

Made of: Iron with a

distressed finish

Highlight: Where

you find a flourish

every curve, 95 per pair,

veryslow.com



4> Oak leaf motif
Size: 12"D x 5"H
Material: Cast iron
Highlight: Antiqued, patina finish
Price: \$54
Source: Iron

5> Heavy metal
Size: 7 1/2"D x 4 1/2"H
Material: Powder-coated cast iron
Highlight: Subtle patina
Price: \$44 per pair
Source: Iron

6> Brass back
Size: 7 1/2"D x 5 1/2"H
Material: Powder-coated cast iron
Highlight: Patina finish
Price: \$38
Source: Iron

7> Delicate detail
Size: 8 1/2"D x 5 1/2"H
Material: Aluminum
Highlight: Powder-coated finish
Price: \$28
Source: Iron

8> Rognesque
Size: 5 1/2"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron

9> In the round
Size: 8 1/2"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron



10> Arch arch
Size: 8 1/2"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron

11> In gear
Size: 8 1/2"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron

12> Craftsman
Size: 7 1/2"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron

13> Verdigris
Size: 9"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron

14> Climbing vines
Size: 11 1/2"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron

15> Gothic look
Size: 11 1/2"D x 5 1/2"H
Material: Cast iron
Highlight: Patina finish
Price: \$28
Source: Iron



TIP

To install brackets securely, screw directly into wall studs. Remodeling? Add bracing between studs before hanging drywall to allow for their placement.

Crisp cottage bath for \$285

Clever trim work, extra storage, and fresh paint transforms a basic bathroom into a clutter-curbing prep zone for two teenage girls in KANSAS.



BEFORE The cluttered bath didn't have enough storage for two teens, and the shower showed early signs of moisture damage.

AFTER A sophisticated medicine cabinet and more shelving in the vanity help keep things organized; simple white-casing and a vibrant new gray-and-white palette give the space loads more personality.

AN IDEAL SITUATION their bath may need a boost to keep up with them. Case in point: the one shared by the twin daughters of Ronda and Les Rensberg, in Miggins, Utah. When the girls hit their teens, their DIYer mom identified a couple of issues: The vent fan couldn't cope with all those long, hot showers—and there was no place for the girls' arsenal of hair supplies and makeup. Ronda began by swapping in a high-power fan and installing wall tile as a moisture barrier above the shower stall. To step up storage, she recessed a wide, deep shelf-top medicine cabinet and added shelves inside the vanity. Then she gave the room a consistent makeover, adding a faux board-and-batten waistcoat over the drywall. A coat of blue paint and new knobs gave the oak vanity a fresh look, as did a marble-pattern Ronda painted on the acrylic top, using leftover gray paint sealed with a two-part epoxy. A pale-blue glass mosaic backsplash and a navy vinyl-and-shower curtain solidified the new color scheme, and display shelves and a new light added charms. Not only have the teens found it easier to keep the space tidy, they're proud of the grown-up design. Says Ronda, who blogs at handicraftsmy.com, "They've brought all their friends over to see the transformation!"



THE PROJECT TALLY

Upgraded a builder-grade wall fan, repaired water-damaged corner board around the only window, and added subway tile above the shower stall... **\$120**

Created faux board-and-batten waistcoat using scrap wood over drywall and finished the walls with leftover paint... **\$80**

Installed, trimmed out, and painted a thrift-store medicine cabinet... **\$66**

Painted the vanity and gave the top a faux-marble treatment, added silver knobs, and repainted the knobs... **\$42**

Covered the existing backsplash with glass mosaic tile... **\$24**

Added a five-light fixture above the mirror, display shelves, and towel bars, swapped out the shower curtain... **\$45**

TOTAL **\$285**

PHOTOS: CHERIE LARSEN/STYLING BY JESSICA HARRIS FOR HGTV



Luck can't keep your kids from using drugs.
But you can. And we can help.

We partner with parents and families to help keep teens from using drugs and alcohol. We provide families with free, science-based resources to help them deal with teen substance abuse, information about the ever-changing drug landscape, programs that help parents engage with their teens, guidance for counseling or treatment if they are in trouble, and support from families that have already faced this problem. We're here to help. Let's work together.

Call our toll-free helpline, 1-855-DRUGFREE. Or visit us at drugfree.org.



of up to 6 feet after 10 years. (Slower-growing miniatures reach only about a foot in height after 10 years.) That means slow-growing dwarf conifers are willing to outgrow their pots in the near future.

Breeders have also come up with cultivars whose foliage color goes far beyond basic green. Like the swatches on a paint-chip strip, new cultivars come in white, variegated on the true-green, blue-green, and yellow-green specimens. Some have variegated foliage, like 'Oboroi' Korean fir, with its white backs and green needles backed with white. Others, like 'Twinkle Toes' cedar, offer the contrast of bright yellow spring growth against the dark green of its mature foliage.

When designing with dwarf evergreens, it's as if a paid idea to follow the old-standby container formula of counterbalancing heights, spillers, and fillers. Tall pyramidal-shaped evergreens, like dwarf Alberta spruce, command attention because they look like tiny holiday trees at the back of a container.

Fillers are typically broad at the crown or resembling sphere shapes, like some cypresses and firs, and are placed at the base of the thriller. Spillers, like creeping juniper and low-growing hennipines, cascade over the edges of the pot.

Most of these evergreens like full sun, though some can tolerate partial shade. During the summer, deep irrigation will ensure the plants don't go brown if you go away on vacation. A layer of mulch will also help keep their roots moist.

Keeping dwarf conifers from drying out is key, because evergreens are slow to show signs of stress. They rarely drop needles or leaves,



Fine foliage: Dwarf conifers offer a wide range of textures—these short, soft needles to whorled leathery growth—that invite a closer look. Their colors run from bright chartreuse to dusty blue and almost every shade of green in between. To maximize the yellows in the pot, be sure to place pots in full sun.

but once their foliage turns copper, they don't bounce back the way perennials and annuals do. The limited amount of soil in a pot naturally makes a container plant more susceptible to drought. A windy location can also be drying, especially in winter, when evergreens continue to lose moisture and must combat the stress of a frozen root ball. In Zones 5 and below, potted evergreens should winter over in a sheltered area or an unheated garage.

Planted with well-draining getting-soil in a properly sized pot—one that is half as high and wide as the tallest plant—dwarf conifers are unlikely to need reapplying anytime soon. The only boost they need is an annual dose of slow-release, low-nitrogen fertilizer come spring. Pruning usually entails snipping off a wayward branch here and there. With minimal care, they can look mean as just for seasons, but for years, to come.

Inspired designs

These container gardens, created by Iseli Nursery in Boring, Oregon, show off dwarf conifers' surprising range of color, form, and texture.



Let it flow: Here, left and right, Oboroi Korean fir anchors the container's low rectangular shape, while shorter 'Gai Kanari' fir fills the space beside it. Cascading groundcover is spilt over the sides for a lush, informal look.



Tall focal point: To get the scale right, pick a plant that's twice the pot's height. Check out from top: 'Iron Dilly' Alberta spruce, 'Hawa Kana' cypress, Golden Spruce 'Wingspread', 'Shiragiku' Chinese juniper, and 'Mitsuki Mori' magnolia.



Colorful combo: Show off the range of shades, from chartreuse to blue green. Clockwise from top: 'Hawa Kana' cypress, 'Dwarf Japanese' Japanese holly, 'Mother Lode' juniper, and 'Gai Kanari' fir cascaded with red-tipped succulents.



Single stunner: When potted one plant with unique color into a cultivar that stands down the sides creates a solid look. 'Whisper' western red cedar's firm sweep of striking glassy green leaves that turn bronze in winter.



Keep them watered

An automated drip-irrigation kit prevents pots from drying out.

STEP 1: Install the battery-operated timer on the spigot. Here, connect the kit's 1/2-inch hose to it. Run the hose to where the farthest away container sits and snap the end. Use the hole punch to make the hole where tubing branches off.

STEP 2: Insert a connector into the back hole. Then add a length of 1/2-inch tubing long enough to slide into the pot. To enter multiple plants in one pot, add a few connectors for a tubing network, as shown.

STEP 3: Use more tubing to branch out of the tree and fit each a micro-tube emitter. Soak the 3/16-inch jet holes with the thumb. Then set the timer to water for two 30-minute sessions a day. Tied the first few inches of soil with your finger—if it feels like a wrung-out sponge, it's time to add the watering time. ■

Nautical living room

A crisp navy-and-white palette and ocean-inspired accents give this sitting area shipshape style. BY MICHELLE BRUNGER

EVOKING BOTH SEA AND SKY, blue and white is a timeless color combination that can anchor any room. It's easy to see why this classic pairing has become the go-to palette for coastal style—but how to navigate the look without going overboard? First, white walls set a clean foundation for a sleek sofa with contrasting trim and coordinating club chairs. Playing with patterns—bold stripes, a graphic rug—adds visual punch. Wood pieces warm up the two-tone scheme, while nautical accents, like a statement-making ship's wheel, solidify the theme.

Ready to dive in? Here's how to bring the look home.

patterned lamp

The base of the light in right-hand corner adds a vibrant bit of color against the white wall. This ceramic table lamp provides the same pop. *Bellevue Quatrefoil lamp, \$69, overstock.com*



ship's wheel

Whether it's a vintage wheel or straight from the store, a replica's wheel makes a real worthy focal point. *36 inch diameter, \$34 wayfair.com*

graphic rug

A flat weave with a geometric pattern in navy and ivory grounds the room and is easy to reconfigure—should sandy feet make it this far. *Willow runner rug, 17" by 9-6", \$276 wayfair.com*



accent pillows

Park up solid sofa with classic stripes and a hand-loomed weather-vane design. Left, \$56; overstock.com. Right, \$119; etsy.com/pillows.com



* get this look for less



coffee table

The attractive X motif on this distressed table echoes the one on the left, with a key difference: A fold-over top can double the width when you're hosting a crowd. *\$299, etsy.com/target.com*



candle lanterns

A staple of coastal decor, lanterns like these are sure to protect flames in your coastal interiors. Large lantern, \$29; and small lantern, \$15, both at target.com

coastal artwork

Hand-painted on natural burlap using water-based inks, these framed sea-themed prints share subject matter—crabs and compasses—with the area at left. *\$42 each, wayfair.com*



striped sofa

The buzzy style in the photo at left has clean lines and cheery nautical trim, more often a similar look with the addition of a comfortably curved element. *Quinn sofa, \$1,190; theposternycast.com*



Revamped with a stamp

Take a blank wall in a new direction with this easy DIY technique

BY MICHELLE GRUNNER • PHOTOGRAPH BY ANDREW MCGALL

SAY THE WORDS sponge painting and most people think of the busy finish that was popular in the 1980s. Back then, homeowners pranged walls and even whole rooms in affordable posh Tupperware, but the same basic technique can be used to deliver a fresh new look. Here, spongy stamps are cleverly deployed as stamps. Cut into triangles in two sizes, dipped in paint, and applied to the wall, they leave an imprint that suggests a painterly arrowhead. Stacked in vertical rows, they create a pattern with movement and energy.

While methodical painters can map out a perfectly repeating pattern, less artists can wing it, as we did here. It's foolproof paint method—even for the shabby-handed. Varying the pressure makes mistakes and lends an appealing block-printed look. In other words, imperfections become part of the charm. Think of it as a quick fix for plain walls when you don't have the patience for mazes or the budget for wallpaper—on idea that gets our stamp of approval.



STEP-BY-STEP



1) Make the stamps. Use scissors to carefully cut triangles out of a large grouting sponge. We made one 4 inches high and 2 inches wide, and another one 2½ inches high and 2½ inches wide.



2) Determine spacing. Starting in the middle of the wall, use a yardstick to plot your pattern. Make pencil marks where the centers of your vertical rows will be. Ours are 18 inches apart.



3) Draw lines to guide you. Using a level, make a vertical dashed line about 1½ inches below each pencil mark, extending up to the ceiling and down to the floor. This will guide where you place the stamps and help keep your rows straight.



4) Apply paint. Dip a stamp's point and scrape off excess on the pan's edge. Using light, even pressure, center the stamp over a vertical line. Continue upward down, alternating between large and small stamps. Repeat on the next row, reversing the direction of points. ■



PROJECT OF THE WEEK

HOW TO BUILD A SIMPLE DECK



Photo: iStockphoto.com

If you've always dreamed of building your own deck, but were hesitant to tackle such a large, complicated construction project, we've got some good news. All you need are a few basic carpentry tools and the desire to invest a little sweat and equity.

The deck shown here features a pressure-treated floor frame that's supported by a ledger board and concrete piers, and topped with 5/4-inch cladding. And because the deck is only one step high, no railing is required.

You'll find all the tools and supplies necessary for this—and any—home project at The Home Depot nearest you.

For step-by-step instructions, go to thisoldhouse.com/project

Build a tree fort

Use specialty hardware designed to preserve the tree and a mix of lumber and branches to create a platform sturdy enough to support the wildest of imaginations

BY SAI KAGUDA • PHOTOGRAPHS BY ANTHONY TROIA



KIDS WILL PASS THE TIME

It's nearly any backyard for a little while. Add a tree fort and you introduce an element of adventure that will keep them playing into the twilight hours on. That's how Kevin O'Connor, host of *This Old House*, remembers his childhood. And it's why he took charge of building a fort for Katherine and Maria Ricci, the owners of last season's project house in Belmont, Massachusetts. "When my dad built his plywood scraps house from job sites, we added them to any of the neighborhood forts we had going," Kevin says. He built a tree house for his own kids but points out that a simple platform provides plenty of fun. "All they really want to do is climb up, look down, and throw things at each other."

Kevin and TCM general contractor Glen Silva built the platform for the Ricci's son and daughter out of pressure-treated wood, and suggested it with specially hard wood that requires just four holes through the tree's vital cambium layer. Follow along as they show you how to create a distraction-free zone that keeps the kids entertained for about 30 minutes.



COST \$1,700*
TIME Two days
DIFFICULTY Hard
Installing the drilling hardware isn't the hardest part, but the framing is building.

*Cost doesn't include the cost of the tree fort. See www.thisoldhouse.com for more details.

TOOLS

- tape measure
- high torque 1/2-inch drill
- 3/8-inch self-tapping bit
- Kwik Bolt
- carpenter level
- 2x4-inch sugar bit
- 3/4-inch auger bit
- 3/8-inch socket
- constant wrench
- one pipe wrench
- hammer
- drill driver
- 4-foot level
- rubber square
- circular saw
- reciprocating saw
- 1/2-inch drill
- adjustable wrench
- bolt tie lock
- 1/4-inch auger bit
- compass/face line
- jigsaw
- chisel

MATERIALS

- pressure-treated pine 2x6s Get six 10' boards.
- pressure-treated pine 2x4s Get seven 10' boards.
- 2x4s for framing Get two 12' boards.
- pressure-treated pine 1x6s Get 12' boards.
- pressure-treated pine 1x4s Get 12' boards.
- 4- to 6-inch diameter tree branches Get 10 about 10' long for the posts and 10 for the rails.
- 2-inch diameter tree branches for balusters Get about 10 or enough to replace them 3x3.
- 1x6-inch boards for corner posts.
- 1x6-inch boards for 2x4s to 2x6s to 2x8s to 2x10s to 2x12s to 2x14s to 2x16s to 2x18s to 2x20s to 2x22s to 2x24s to 2x26s to 2x28s to 2x30s to 2x32s to 2x34s to 2x36s to 2x38s to 2x40s to 2x42s to 2x44s to 2x46s to 2x48s to 2x50s to 2x52s to 2x54s to 2x56s to 2x58s to 2x60s to 2x62s to 2x64s to 2x66s to 2x68s to 2x70s to 2x72s to 2x74s to 2x76s to 2x78s to 2x80s to 2x82s to 2x84s to 2x86s to 2x88s to 2x90s to 2x92s to 2x94s to 2x96s to 2x98s to 2x100s to 2x102s to 2x104s to 2x106s to 2x108s to 2x110s to 2x112s to 2x114s to 2x116s to 2x118s to 2x120s to 2x122s to 2x124s to 2x126s to 2x128s to 2x130s to 2x132s to 2x134s to 2x136s to 2x138s to 2x140s to 2x142s to 2x144s to 2x146s to 2x148s to 2x150s to 2x152s to 2x154s to 2x156s to 2x158s to 2x160s to 2x162s to 2x164s to 2x166s to 2x168s to 2x170s to 2x172s to 2x174s to 2x176s to 2x178s to 2x180s to 2x182s to 2x184s to 2x186s to 2x188s to 2x190s to 2x192s to 2x194s to 2x196s to 2x198s to 2x200s to 2x202s to 2x204s to 2x206s to 2x208s to 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2 Add the carrying beams

A) Install the beams. Mix a beam by joining a pair of 2x10s with construction adhesive and 35d ring shank nails. Slide the beam onto the pipe bracket, as shown, and center it. Attach the bracket to the beam with 4-inch structural screws. Level the beam using a 4-foot level. Then brace it by driving 3-inch deck screws through 2x4s or deck boards and into endwood of the beam. Repeat the process for the beam on the opposite side of the tree.

B) Add headers. Attach joist hangers a few inches inside the ends of the beams with 3/8-inch joist hanger nails. Make a short beam with more 2x10s bolted in the hangers. Nestle the header in the joist hanger and nail it in place with more joist hanger nails. Its done. Repeat it at the opposite ends of the beams.

3 Make the knee braces

A) Fit the knee brace. A specialty bracket and 4x6 post support the end of the beam assembly. Use a rafter square to hold the bracket at a 45° angle to the tree, as shown. Pull the tape measure from the metal tab to the underside of the header to get a rough length. Repeat this step on the other side of the tree.

B) Form the bird's mouth. Start by making a mark on the board 2 1/2 inches up from the bottom edge at the 4x6. Rest the shoulder of the rafter square against the bottom edge with the 45° angle to the board and. Draw a 45° line from the mark to the bottom edge. Flip the square over with its shoulder against the opposite edge and the angle facing the end. From the mark, draw a second line along the angle to the top edge, creating an angle, called a bird's mouth, on the face of the header. Drill a hole along the line with a circular saw. Then finish with a reciprocating saw, as shown. Measure from the corner of the L and cut the header to length.

C) Cut a sheeklet slot. The knee brace bracket rests in a slot cut into the end of the 4x6. To make the joint, use the rafter square to mark the center of the end of the 4x6. Then use a circular saw or chainsaw to cut a 1/4-inch-wide channel in the timber along as the rafter square bracket. Make a second knee brace following these same steps.



4 Install the braces

A) Add the legs. Hold the knee-brace bracket against the base of the 4x6 at the notched end and mark the two bolt holes. Use a 5/8-inch bit to drill through the timber. Set the bracket into the slot, hammer the leg bolts through as shown, then add washers and nuts. Tighten them with an adjustable wrench. Repeat for the second brace.

B) Connect beams to header. Turn a 2x4 post 14 inches on center to the carrying beams with ring shank nails to create an 8-by-10-foot framework. Use hurricane ties to reinforce the post-beam connections. Lift the header about an inch with a 4x6 and a bottle jack—you'll need it to put tension on the brace once it's installed. Hold the brace in place with the bird's mouth biting the header. Drive a pair of 6-inch structural screws through the outside of the header and into the 4x6, as shown.

C) Bolt hardware to the tree. Hold the end of the knee brace bracket to the tree. Using the metal tab as a guide, drill an 8-inch deep hole into the tree with a 3/4-inch auger bit. Thread a 35-inch galvanized lag bolt into place and tighten it with a ratchet wrench. Leave a few inches between the hole and the bolt head to accommodate tree growth. Now lower the jack and repeat the process on the other side of the tree.



TIP To accurately scribe the boards that run into the tree trunk, hold the compass so its legs are parallel with the joint in the boards.



5 Build the deck

A) Attach the decking. Place a piece of full-length decking 2 inches from the tree to allow for growth and hammer ring shank nails through it into each joist. Work out toward the edge of the framework, using the same nails in spaces between boards. Skip about a foot from the joist ends.

B) Get the short pieces. Now work in the other direction, nailing the boards interrupted by the tree. Scribe the ends to follow the contour of the bark, as shown. Cut the nails with a jigsaw, and attach the boards again leaving 3 inches for growth. Install all the interrupted pieces, then continue laying full-length boards. Skip a foot along at the joist ends. With the decking in place, trim the ends of the boards with the jigsaw, creating smooth edges.

6 Add the rail posts

A) Install blocking. For the corner posts, nail 2x6 blocking about 8 inches in from the joint ends of the first and last joist bays on the long sides. Add blocking for two field posts evenly spaced between the corners. The rail posts are made from straight fir branches 4 to 6 inches in diameter. Make a lower post by sawing a 70-inch long notch at one side of a branch with a reciprocating saw, as shown.

B) Attach posts. Position a corner post with the notch against the post and shoulder on the decking, and drive a pair of 10-inch structural screws through the post into the blocking, as shown. Repeat with the remaining corners and field posts for the long sides. Now nail the last deck boards to fit around the posts and install them.

C) Finish the ends. On the short sides, plan for one field post between the corner posts. Notch all four sides of the field posts with a reciprocating saw. Hold a post in place on top of the decking marks around the notch, then cut a square with a square. Drop the field post in the hole, as shown. Use 10-inch screws to attach the post to the side of the joist.

TIP Use a scrap piece of 2x4 to help space the balusters consistently.



7 Attach the railing

A) Add the rails. Use a reciprocating saw to cut the field posts about 2 feet tall and notch their tops for a half lap joint. Find one long top rail that spans corner to corner and notches ends to complete a half lap joint with the posts. Then notch the rail's underside where it meets the field posts with a buffer saw and a chisel. Drive deck screws through the top rail end into the posts. Attach the bottom rail sections between the corner and field posts.

B) Finish the railing. After the arrival of 2-inch diameter branches to make balusters, drill pilot holes through the notched ends and into the top rail and attach with deck screws, as shown. Remove the other end of the balusters into the bottom rail. For safety reasons, space the balusters about 3 1/2 inches apart. Attach the cargo netting to the fort with eye hooks and secure the other end using slings. ■



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Q I found my dad's collection of metal washers and it got me wondering: Why call them washers when they aren't used to clean things?

—CHRYSOEELLE MARITTA GA

A Yes, it's a odd. But a disk with a hole in its center has been called a "washer" (or "whasher") since at least 1346, though nobody knows exactly why. Be that as it may, these flat pieces of metal play a critical role by spreading loads beneath bolt heads and nuts and making the fasteners easier to tighten. Star washers (1) and spring washers (2) serve a different purpose: to prevent nuts from backing off.

—THE EDITORS

PHOTOGRAPH BY LEVI BROWN

44

tips, tricks, and
answers to
your home-
improvement
questions

Our panel of veteran experts



TOM SILVA
General Contractor



NORM ABBAN
Master Carpenter



RICHARD TRETHEWEY
Planning and Healing Expert



ROGER COOK
Landscape Contractor



KEVIN CONNON
Artist

The cobblestone edging along my gravel driveway keeps getting knocked over by car tires. Anything I can do to prevent that?

—FRANKIE HALEY, MOBILE, AL



Roger Cook ends with a granite cobblestone that was chiseled by a mason so he can seat it in the hole with the edging. Despite its heft, the stone is relatively easy to move with the right tools and technique.

ROGER COOK REPLIES: If a car tire can push your cobblestones out of alignment, then they're probably just hocked in earth, like the one I've resting at left. To stop the stones from moving, they should be set into a concrete pad.

Start by removing the existing edging. If you're lucky, the blocks you have are pavers—roughly 10 by 7 by 4 inches—like the one I'm lifting here. That's the case you want along a driveway because it can be turned out and dropped. Stakes over the path of your edging on the driveway side, and tie a taut string line between stakes to guide your digging. Excavate a flat-bottomed trench roughly 1 foot wide and 10 inches deep.

Next, set the string line 3 inches above the gravel. That's the height the edging should be to hold back the gravel. Now mix a bag of concrete in a wheelbarrow and pour a 3-inch-thick layer into the trench. Place the first cobblestone narrow end down in the concrete so its top sits about 8 inches above the string. Then, using a rubber mallet, pound the stone down until it's level with the string line. Continue setting cobbles tightly together until you reach the end of the pad, then trowel a wedge of concrete against the

back of the stones up to the driveway surface. Repeat until the edging is complete. There's no need to mortar between the stones; it would just crack and need to be repaired.

Looking for a new basement floor

We have an engineered wood floor glued to the concrete in our basement. Can I go over it with tile or another layer of wood, or will the glued flooring have to be removed?

—JOHN KARNES, WATMAN, VA

TOM SILVA REPLIES: It depends. You can go right over the engineered flooring with another layer of wood flooring, assuming the original layer is flat and well adhered. But if you choose tile, then the old floor will have to go. Wood joists under a layer of concrete and mortar provides a perfect environment for rot.

If you're going with wood, you can either nail down strips or planks in the traditional manner or float an engineered flooring over the original. For a nail-down application, first secure 5/8-inch plywood underlayment to the old flooring using construction adhesive and nails, then nail the new floor to the underlayment. With a floating floor, there's no need for that extra layer of plywood, a thin foam mat serves the purpose.

For a tile job, once the old floor is gone, lay sheets of cement backer board in thickness and cover the joints with fiberglass tape. Then tile as usual.



What is it?

- Deck post anchor
- Firewood splitter
- Stone cutter
- Boat scraper

FOR THE ANSWER, GO TO PAGE 50

Stop the sap-suckers

Several trees in our yard are rimged with tiny holes around the trunks. We think

the damage is caused by woodpeckers going after bugs. Can we get rid of the bugs so the birds will go elsewhere?

—CAROL AND BOB LITTLE, MINNEAPOLIS, MN

KEVIN O'CONNOR REPLIES: This is a good question for a tree expert, so I got in touch with Trishukta Andersen, a beetle-certified master arborist on the staff of the Tree Care Industry Association. Here's what she had to say:

"The holes of closely spaced holes indicate that your trees have been visited by yellow-bellied sapsuckers, a type of woodpecker that summers in New England and the Great Lakes states. It isn't going after bugs under the bark. As its name indicates, it feeds on the sap that comes out of the holes that

it repeatedly pecks, and on the insects attracted by the sap. Red maple, paper birch, and eastern hickory are sapsucker favorites, but this bird will also go after many other tree species.

"Unfortunately, all those holes aren't good for a tree. They will disrupt the flow of sap, and provide an entrance for insects and decay fungi to invade. Most trees can put up with this drilling, however. For a tree, but then go into decline.

"Sapsuckers may not be picky about the trees they peck, but they don't like unfamiliar surfaces under their feet. So they won't like a if you wrap trunks with burlap or small-mesh hardware cloth. Check these alternatives each year: Replace the burlap when it deteriorates, and adjust the hardware cloth so it doesn't cut into the bark.

"You can also try hanging CDs or Mylar ribbons from the branches. There's evidence that their random movement and flashing disturb sapsuckers, as well as other woodpeckers.

"Finally, check with your local extension service. It may have specific control strategies that work with the sapsuckers in your area."



The yellow-bellied sapsucker is one of the sapping woodpeckers that bore holes around tree trunks (above).



PHOTO: JACQUES TOFFI; COURTESY OF THE TREE CARE INDUSTRY ASSOCIATION

Below-grade toilet
I'd like to install a bathroom in my basement, but the drain is on the wall and about 3 feet above the floor. Would a toilet that flushes up work in that location?
—LORETTA GOURGNOT, KANSAS CITY, MO

RICHARD TRETHERY REPLIES: That's exactly what you need. It's called a macerating toilet system because the toilet bowl is attached to a tank with an electric motor that automatically grinds up waste and then pumps it up to a drain. That drain can be as high as 13 feet above the unit and as far away as 150 feet.

Unlike standard bowls, these specialized toilets discharge horizontally into the tank, so there's no need to install pipes under the floor. They're water-efficient, too, using as little as 1 gallon per flush. To see a video of me installing one of these units, made by Saniflo (saniflo.com), go to thesaniflo.com/enrhomecenter.

If a full-size bathroom is in your plans, consider getting a macerator that's able to handle wastewater from a sink and shower. These units operate at

What is it?

Stone cutter
The Long Cutter lets you quickly trim stone and brick up to 2 inches thick with a brick hammer, as shown. Unlike grinders, it leaves a rough, natural edge and doesn't kick up clouds of dust. \$249, rock.com



less than 35 decibels, a bit quieter than a refrigerator. You can also place the tank out of sight behind a wall, which will help muffle the grinding and pumping noises. Just make sure there's a way to access the unit for maintenance.

As with any toilet, these units are built to handle only human waste and toilet paper. If napkins, hand wipes, or dental floss is flushed down the bowl, you'll damage the fan of cleaning or a clogged macerator.

Porch leaks

Water is leaking through our front-porch floor into the finished basement underneath. Right now, the floor is covered with outdoor/indoor carpeting over plywood. Is there a way to seal the floor to stop the leaks?
—JACQUE DUFFY, MORRIS, MN

TOM SILVARI REPLIES: Long ago, people solved this problem by attaching heavy-weight cotton canvas over a tar-saturated membrane called Fresh-Tek and then painting the canvas with multiple coats of oil paint.

At the East Boston TV project in

2006, we used an updated approach on a second-floor roof deck, an elastomeric roofing system made by Acrymaxx (acrymaxx.com). It's basically a layer of polyester fabric backed by multiple coats of a thick acrylic paint that can withstand foot traffic and ultra violet rays. The finished product actually looks a bit like painted canvas. Even better, the installation process is simple enough for a careful DIYer to handle.

In your case, the process starts by taking off the old carpeting and plywood. Then you screw down fresh sheets of 1/2-inch exterior-grade tongue-and-groove plywood and cover the seams and screwheads with a coat of elastomer and strips of the fabric. Next, roll another coat of elastomer over the entire porch deck, lay sheets of the fabric over this wet base coat, and apply more elastomer over them. When the surface is dry, apply at least two top coats of a different elastomer, one formulated to protect against dirt, salt, and abrasion. Those top coats should be a different color from the base coats so that when the base color shows through, you'll know it's time to recoat.



When finished, the system's total thickness, including the plywood, comes to about 11 inches. And the square-foot cost for materials runs between \$3.50 and \$3.80.

Groundcover for pathways

What can I plant between the stepping-stones in a path on the north side of my house? It gets full sun in summer and dapples shade in winter. Please, nothing invasive!

—NIGHT REBEL,
THOMPSON'S STATION, TN

JENNIFER NUNDA REPLIES: I see you're a hardcore ground-hugging perennial for stepping-stone pathways. They perform well in the sun, survive water shade, and are hardy in your climate, Zone 6.

1 Purple creeping thyme (Thymus serpyllifolius) or white creeping thyme (Al. serpyllifolius). These

Herbaceous plants spread quickly, but a root-controlled invasive because it doesn't cause problems in wild areas. The other two flowers bloom in late spring to midsummer.

2 Irish moss (Cladonia selaginella) or Scotch moss (Cladonia selaginella). Not true mosses, they're a striking, bright green with tiny, white, star-shaped flowers.

3 John Creech's stonecrop (Sedum sp. 'John Creech'). Not true mosses, they're a striking, bright green with tiny, white, star-shaped flowers.

4 Red creeping thyme (Thymus serpyllifolius). These plants have a lovely creeping habit (they'll form a dense mat) and come in a wide range of colors, from white to red.

Jennifer Nunda is a Nashville Landscape Designer in Boston. She appears regularly on TV episodes of Ask This Old House.

GROUNDCOVERS BY COLOR

- 1 Purple creeping thyme** (Thymus serpyllifolius)
- 2 Irish moss** (Cladonia selaginella)
- 3 John Creech's stonecrop** (Sedum sp. 'John Creech')
- 4 Red creeping thyme** (Thymus serpyllifolius)

lavender, but pink flowers **5 Red creeping thyme** (Thymus serpyllifolius). These plants have a lovely creeping habit (they'll form a dense mat) and come in a wide range of colors, from white to red. They all have similar up-to-the-ground growth habits, tolerate dry conditions, and have pink flowers in late spring and early summer. And they emit a delicious herbal scent when stepped on. Their differences show in the color of their tiny leaves. Red creeping thyme is dusty gray, lavender thyme is light green, and red creeping thyme is deep green.

Generally, work all these groundcovers, you plant them about a foot apart and wait a couple of years for them to grow together. But a closer spacing will also work if you want to shorten the wait and don't want the initial extra expense. Just make sure their actual soil between the stones, and not just dirt or sand. As you're planting, shake some soil off the roots so you can tuck them between the stones. And blow a little Rotten Healthy Stem Fertilizer (blowfertilizer.com) into the soil to encourage the roots to become established.

These plants may need occasional weeding as they fill in around the stones, but once they form a continuous carpet, the weeds should be minimal. ■

ASK THIS OLD HOUSE

Go to thisoldhouse.com/askthoh or write to Ask This Old House, This Old House magazine, 262 Melrose Drive, Stamford, CT 06902.

We'll try to complete letters and questions within 60 days. Questions and answers will be edited for clarity and length and may appear in other print or digital media. Feedback on the column is appreciated. We'll be happy to reply to unsolicited questions.



A plumber contracts a rear discharge toilet macerator unit, which is placed behind a wall.



OLD HOUSE

The Terbolts family uses various smart home technology to keep an eye on their 1900s house as well as save energy on utilities and control lighting and music. The wireless nature of the tech means there's no need for any special wiring or cables.



GROWING HOUSEHOLD



SMALL HOME



GREEN HOUSE



VACATION HOME

REALLY SMART HOMES

There are a lot of choices these days in the way of connected devices designed to save time and money around the house. Maybe too many.

To help you sort through them all, we've put together **a menu of 5 starter kits** tailored to different types of homes and homeowners—from a family of five in a century-old clapboard gem (left) to a couple hoping to retire soon to their beach-retreat vacation home.

By John Patrick Pollen

1. this smart old house

After having the same website riddled through here in five years while parked right at the driveway of his family's Providence, Rhode Island home, Alan Tortolero took up a security solution. A tech-savvy mobile-gamer-developer, he pointed a streaming video camera at the driveway from an upper-story window. But using an indoor camera to record through the glass turned out to be a work. "There's a glass and the motion detection on the Next Cam seems to be overly sensitive," says Alan.

As it happened, soon after the trouble started, the light over the garage quit working, and he discovered the Kano Smart Home Security Light. Not your average old-fashioned outdoor sconce, it features a high-definition video camera, a microphone, a speaker that can stream a 100-episode series, and a motion detector that can trigger a light and/or video recording. All these functions can be controlled from a smartphone or tablet. As a bonus, the vintage styling of the Wi-Fi connected device is a natural fit for the family's 1938 house. Alan says it took him about 30 minutes to install the sconce.

Given the chintzy settings of a playset, Tortolero and his wife decided to install a second Kano to keep an eye on the side entrance. "We have another issue in the neighborhood with packages being lifted,



Alan Tortolero, a tech-savvy mobile-gamer-developer, pointed a streaming video camera at the driveway from an upper-story window. But using an indoor camera to record through the glass turned out to be a work. "There's a glass and the motion detection on the Next Cam seems to be overly sensitive," says Alan.



especially during the holidays," he says.

Like the fixture, the sconce is wireless, and it's easy to use. Then he can open the app and watch a video feed in real time, and verbally warn off a would-be burglar by talking into his phone. He hasn't touched any crooks yet—but he's okay with that.

WE ALSO RECOMMEND

Next Cam Using wireless smart sensors, this Apple HomeKit-enabled internet-enabled motion sensor (154) can be used either over a Wi-Fi network or over a cellular network. It's also too hot to handle in the kitchen, or by sending only the room where it senses movement. \$149. nextcam.com



Kano Home Smart Vint System The device is an outdoor, tamper-proof outdoor camera that can be used to monitor your home's exterior. It's also too hot to handle in the kitchen, or by sending only the room where it senses movement. \$149. kano.com

Lutron Caseta Wireless in Wall Dimmer Kit This is a dimmer switch that can be used to control your home's lighting. It's also too hot to handle in the kitchen, or by sending only the room where it senses movement. \$149. lutron.com



Kit price: \$154

2. the growing household

Papal Chaturvedi and Ashish Jain have had their hands full lately. With an 8-month-old son and careers as tech-industry product managers, the San Francisco couple find themselves juggling quite a lot. But with Amazon Echo, a voice-activated smart speaker and home automation hub, they simply call out "Alexa" and the virtual assistant perks up, ready to take on tasks from providing traffic updates to turning on their connected lights. Echo is always listening for its wake word, and its seven microphones can pick up the utterance from the next room.

Ashish takes full advantage of the cloud-connected device's various services, first and foremost to play music from Pandora and Prime Music. "Our son actually loves that because we have a playlist for him, and he gets very excited when we tell Alexa to play music and it plays this," says Papal.

To set up the lighting automation, Ashish installed GE Link LED bulbs in standard fixtures. Papal loves the convenience. "When I'm going to bed, I say, 'Alexa, turn bedroom off,'" she says. And while it's true that the couple enjoys tech for tech's sake, this is really about convenience. "Having something that basically means your hands are always off the phone," says Ashish. With Alexa, he says, "You don't have to get the child down and pick up a device." As their son grows, they imagine so will Echo's role in their house hold. For instance, they're starting to use it to teach him, even if it's just through cartoons. "Being a typical Asian mom, I'm there spelling words to him, so I tell Alexa, 'Spell apple' while I'm feeding him," says Papal. "I think he is going to say 'Apple' before he says 'mama'."



Amazon Echo, \$130. amazon.com

WE ALSO RECOMMEND

Whisper Smart Tap-Less Washer and Dryer This laundry set works both hand and smart, letting you start, stop, and pause cycles from anywhere. Double wash and dry cycle home from work or ball a city ball that's out of town. \$1,999. whisper.com



Kwikset SmartCode 906 This is a smart lock that can be used to lock and unlock your door from anywhere. It's also too hot to handle in the kitchen, or by sending only the room where it senses movement. \$219. kwikset.com



Next Cam Using smart sensors, this Apple HomeKit-enabled internet-enabled motion sensor (154) can be used either over a Wi-Fi network or over a cellular network. It's also too hot to handle in the kitchen, or by sending only the room where it senses movement. \$149. nextcam.com



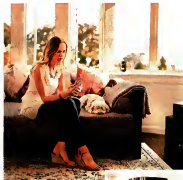
Kit price: \$1,999

3. the connected condo

When event planner **Lizaveta Sergeev** and her 15-pound poodle, Sandy, moved from Las Vegas to San Francisco last year, they traded a home with a yard for a hip floor condo. Now they share the two bedrooms with Lizaveta's boyfriend and another couple. "Everyone lives who's a lot, so I'm home alone frequently," says Lizaveta. She bought Piper, a combination 180-degree security camera and home automation hub, to keep tabs on her flat and her poodle, not to mention the rotating cast of dog walkers. "Coming home late from work, it's just nice knowing that nothing's happened," she says. "Piper notifies me when there's activity in the apartment, so I know ahead of time whether someone has entered."

Piper's motion- and sound-detecting sensors can ping her phone when there's movement or commotion, and she likes that it has a pet-friendly mode that doesn't send too many messages. It also has a two-way speaker that Lizaveta uses to soothe Sandy. "If she looks sad, I'll say something to her," she says. "She totally responds."

The device monitors temperature and humidity, and if Lizaveta wanted, at some point she could connect other devices, from smart light switches to door and window sensors, no



ling as they talk 2-Wire, a popular wireless networking protocol. And through IPTE (If This, Then That), a third-party service that links all sorts of Web-connected apps and devices, Piper's skills can be customized even further.

Through an app called *Interactivity*, Lizaveta's primary concern, Piper did once capture a burglar. After a night of celebrating a new job, the next-door neighbor—who sometimes walks Sandy—accidentally entered the wrong apartment and left on Lizaveta's couch. "I had a Piper video of that," she says. "And it was hilarious."



Piper v2, \$260 (piper.com)

WE ALSO RECOMMEND

822 piper \$260



August Smart Lock Can't change the dead bolt on your front door or an inconvenient homeowner association? This automated pad replaces the interior dead-bolt mechanism automatically lock and unlock the door via Bluetooth or via Energy (ZigBee) as you come and go. \$299 (august.com)

Seven Play 2 This speaker producing sound in formal spaces, Seven 2 streams everything from Apple Music to Spotify from the Web, not to mention phone-to-Bluetooth pair-and-convertible, easy from the speaker and out your favorite streaming app. \$199 (seven.com)



Smart Smart Bulbs We'll let you decide whether to smartify your lighting bulbs or not. By installing a smart bulb, you'll be able to control your lights from your phone and emergency situations to family emergency. \$49 (getsmart.com)



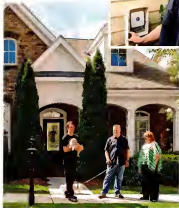
4. the green house

Philip Sperry never considered himself to be particularly green. But when the information technology product manager installed the Rachio Smart Sprinkler Controller to water the yard of his Sonoma, Georgia, home, something changed. Most notably, his water bill. "I figure I've reduced my water consumption for irrigation by nearly 90 percent," he says.

Philip's smart garden makeover began when he set up a final controller that was easier to program than those with buttons and dials. He found the Rachio, a controller that connects to a home Wi-Fi network to take advantage of online data and create automatic watering schedules. "It checks nearby weather stations and knows how much rain I've gotten, the temperature, and the humidity," says Philip. "From there it calculates what they call the evapotranspiration rate—then it knows exactly when and how much my lawn or garden needs watering."

Philip further boosted his Rachio's smarts by installing his own Web-connected weather station to provide hyper-local data, and a hard-wired rain sensor.

Before installing the Rachio, he thought his shade garden was healthy. Turns out his previous system was overwatering it. "There was a lot of control growth because it was getting so much water," he says. Improving the precision of the irrigation has made his garden more attractive—his inviting place for Philip's wife Tim and their teenage son together. And now you could say Philip's given it more ways than one: "It'll do something that's smart and save water—and at the same time save a few bucks—it'll all for it," he says.



Rachio Smart Sprinkler Controller, \$225 (rachio.com)

WE ALSO RECOMMEND

82 Rachio \$225



Neuro Home Energy Monitor This green goes beyond what a smart meter can do by gathering information directly from your electrical panel. The Wi-Fi-connected device will send alerts and shed light on the power demands of your other panels, too. \$179 (neuro.io)



Hue Learning Thermostat It shops the temperature patterns from occupancy, geofence, and even data from motion sensors, GPS, and phones from every family member to set back the thermostat you're away. \$249 (hue.com)



Hue Learning Thermostat This smart thermostat is a smart energy efficient smart thermostat. The gamelike.com produces a whopping 30% savings per year (100-watt equivalent) thanks to its advanced sensor chips. \$249 for a solo and two bulb smart bulb. (hue.com)

5. the vacation home

Typically, it is amenities such as hammocks, swimming pools, or scenic views that top the must-have list for a second property. Okey and Andrea Tucker had an additional requirement for their Oak Island, North Carolina, walk-to-the-beach retreat: a Fortrez Wireless Z-Wave Water Valve. It's not so glamorous, but the Internet-connected motorized ball valve does provide a therapeutic effect when they're back home at their primary residence in West Virginia, eight miles to the north, hours away. "You see, they know about water damage. I am a proofer of that kind. 'If I had a system like this, believe it or not, I would've saved myself a lot of headache and headache,'" says Okey.

At the vacation home, the Fortrez valve serves as more than a plug-and-play. It connects to the house's NexaHome security system and Okey uses it as a gatekeeper, locking it turned off by default when the house is unoccupied. The home is also equipped with Schlage connected locks, so if friends are coming to stay at the house, Okey will remotely program the lock with a pin code that triggers the valve to open upon their arrival. They show up, they get water. When they leave, Okey opens the Nexa app and shuts off the water. Add in the

connected video cameras, motion detectors, smoke alarms, and humidity sensors, and the couple can maintain a good sense of what's going on at "Tucker Island" even when they're not on vacation. "It's mostly there for my comfort and sense of security," says Okey.



Fortrez Wireless Z-Wave Water Valve, \$49.95 at \$127.95 (retail)

WE ALSO RECOMMEND



Linkville Connecting via cellular signal, this plug-and-play booster provides the most powerful security system connection with 2.4GHz control panel, one motion sensor, and one door/window sensor, with the optional adding cameras, locks, and switches. Cost: \$199 plus \$40 per month. linkville.com



Logitech Harmony Elite End tech support calls from visiting guests with this universal remote, which speaks infrared, Bluetooth, and Wi-Fi. It controls media devices and also can control smart home devices, so it's there down the hall at all times. Cost: \$199. logitech.com



Verizon Jetpack MiFi Use this mobile hot spot to your Wi-Fi router on display in your play center from remodeling, connect with your phone. Cost: \$199. verizonwireless.com

PHOTOS: GETTY IMAGES

THE SMART HOME CHEAT SHEET

Getting your household up and running with connected devices takes some doing. We've narrowed the list down to the most important items, from privacy concerns to networking solutions

SECURITY



LAST SPRING, a doctoral student at the University of Michigan named **Eulencia Fernandes** exposed a series of design vulnerabilities in Samsung's popular SmartThings platform. His team demonstrated that it could trigger fire alarms, disable vacation-mode settings, and, worse, retrieve pin codes for connected door locks, allowing unforced access. This after news of breached baby cams, thermostats, and garage-door openers. No wonder 71 percent of consumers surveyed by iControl Networks said getting hacked is their No. 1 concern about smart homes. Yet such attacks are rare. And the tech is here to stay—IT research firm Gartner, for one, predicts that a typical home might have 500 smart devices by 2022. Which is to say, the smart play is to learn how to make the most of it. Luckily, we're here to help.

Q&A

Questions for white-hot hacker Eulencia Fernandes

WHY DID YOU PICK ON SMARTTHINGS?

It had support for 132 devices and more than 500 apps in its app store at the time. The idea was, the lessons we learn from these privacy nutcase platforms could be applied to more recent systems, too.

HOW DID YOUR DEVELOPER MISFEAR?

There's a third thing called developer privilege. It means that third-party apps get more privileges to devices than they ask for or need.

HOW DID YOUR RESEARCH EXPLOIT THAT?

We wrote a malware app that reads battery levels of smart home devices. Using just this battery permission, our app can also secretly listen to pin codes from an invading app as the user programs them, then a connected door lock.

IT'S INCREDIBLE THAT THIS WAS POSSIBLE.

I think it comes down to a functionality versus security trade-off. Now, whenever you install an app, SmartThings asks if they want to give the app access to a device or not. That seems more visible than saying, "This app wants to unlock the door or do this specific function." I think they're taking the more visible approach. This tension is what we see again and again and again in computer security.

SO YOU WON'T BE INSTALLING A SMART LOCK?

I have my old-fashioned keys. Thank you very much.

WHAT DO YOU THINK OF THE SMART HOME?

We were trying to raise awareness of what can go wrong. But I think it's exciting technology and it has a lot of potential for benefits.

CONTROL

Voice takes charge of the smart home

Who needs apps? Meet three platforms that use speech-recognition software to rule the roost.

"Alexa..."

Amazon is a cloud-based computer service, which powers the Echo speaker and its related family of devices. Ask for the weather report, play music, and operate certain smart-home devices simply by uttering the request out loud. The open-platform model promises to attract more devices over expanding Alexa's realm of command.

SmartThings Certain light switches and thermostats, as well as a broader array of devices through compatible hubs, such as Vivint's security panel.

"Hey, Siri..."

Apple's Siri is a command assistant, built into the operating system of iPhones, iPads, and the Apple Watch. Siri also controls an array of devices compatible with **Apple's HomeKit** platform, a virtual garden that requires manufacturers to meet strict security and usability criteria.

HomeKit HomeKit-certified outlets, lighting, thermostats, door locks, motorized shades, hubs, environmental sensors (smoke, CO, motion, leak) and home security systems.

"Okay, Lyric..."

Homebrew's Lyric **Security and Home Control System**, a new platform based around a 7-inch touch-screen panel that can be mounted on the wall or rest on a counter top. The professionally monitored system is the only one we know of that includes voice control of video cameras, meaning you could ask Lyric to take a snapshot if you heard something go bump in the night.

Homebrew Homebrew's smoke detector, motion detector, glass-break detector, door/window sensor, siren.

AUTOMATION

Geofencing

The next phase of smart-home tech is about enabling devices to act without your swiping a finger. **Take geofencing:** You set a virtual perimeter to mark off a geographical boundary, such as a radius around your house. Then, with devices that enable the feature, you can specify that certain actions be triggered automatically when you physically cross the boundary. Below are a few prime examples.



- A 328 FEET**
August Smart Lock app notifies you, searches for lock's status, and locks/unlocks door within 30 feet, August.com
- B 3,000 FEET**
Lutron Caseta hub is triggered to adjust lights and remote-controlled shades, Lutron.com
- C 30 MILES**
Homebrew Lyric thermostat adjusts you're coming home and kicks on the AC, homebrew.com

IFTTT

The acronym stands for "If This, Then That," but the simplicity of the conditional statement behind the creative power of the free Web service. It allows you to set triggers, or "recipes," among different Web-based services; "If" a specific condition is met in one channel, "then" it triggers an action in another. Say you wear a Fitbit and own a WeMo coffee maker. Using IFTTT, the exercise band can start the java brewing the instant it senses you're awake.

NETWORKING

Making better connections

Your smart-home network is only as good as your router. Here's our recommendation.



\$499 for three-pack (eero.com)

THERE YOU ARE—STREAMING A MOVIE on your laptop in some far-flung, dimly lit corner of the house when the image freezes, buffering. It's a sign that your Wi-Fi network isn't robust enough to get the job done under your roof. The reason? Wi-Fi routers have switched to a higher frequency to handle HD content, and at the new speed (5GHz), the signal has more difficulty passing through walls than the previous 2.4 GHz signal did. The solution, according to **startup eero**, is to deploy a number of Wi-Fi routers that talk to each other over a mesh network, extending full-strength signal throughout the house. The new system is a boon for smart-home networks thanks to its reliability—the signal is less likely to cut out. And because eero is controlled by an app, you can see at any time which devices are on your network, to make sure you have no unwanted guests. ■



Ask This Old House pro tip

"WIRELESS IS GOOD—sometimes even great—but it's still better to plug into a wired connection. You can't fish low-voltage wire through a wall once the sheetrock is up, so if you're remodeling, when you have everything open, that's your chance. At a minimum, I would run a Cat-5E cable for Ethernet and RG6 quad-shield coaxial cable from a central location to every room. Even better, I like to run what's called smart tubing, a flexible plastic chase that you can send wires through. That way, you can keep up with technology as it changes."

—master electrician Scott Carson, Ask This Old House

GET SMART: If you detect a wall level, recommended connected devices for the home recorder (eero.com)



Carson 5-inch flexible smart tubing, metallic tubing, 4 ft. x 3/4" x 1/4" tubing, \$10 only per foot (farnsworth.com)



LUSH LIFE

An artful mix of curved terraces, vibrant flowers, and luxuriant succulents transforms a challenging backyard

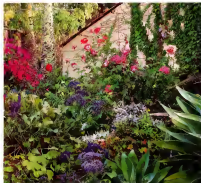
by Sharon Cohen
photographs by Mark Lohman
styling by Sunday Hendrickson

A GARDEN ISN'T JUST A PLACE FOR PLANTS, it's a space for people, too. So why not make it as appealing and complete as any room indoors?

That was Pamela Volante's guiding philosophy when she bought her 1920s Spanish Revival home in Westwood, California. The property was large, offering plenty of space to work with, but the yard, despite the house's age, remained undeveloped. "It was all cacti and agaves," says Pamela, a landscape and interior designer, "sloping down from right to left and from back to front." There were a few mature trees, but otherwise the backyard consisted of a concrete patch with a clothesline. The uneven, unspruced terrain nevertheless inspired her. "The slopes gave the property character," she says. "And I had a clean slate."

Recognizing that a traditional rectangular courtyard, which would complement the home, wouldn't work on the

A circular fountain and pool, blue-tinted to reflect the sky, is the focal point of the garden. A ruffle of bark's ear wraps the circular terrace for sunbathers. Big fuzzy foliage softening the view of the curved folds.



slipping terrain, Panella devised a series of terraced garden beds at different levels. She started with a circular fountain and pond at the center, with carved beds enclosed by retaining walls moving away from the center in all directions like ripples in water, and curved steps leading in and out. On opposite sides of the fountain, she placed seating areas: gazebos at the lower level near the house, and on the raised far side of the grass-ringed pond, a cozy nook for two chairs. For the retaining walls, Panella chose recycled concrete blocks with a rough-hewn appearance. On the patio floor, steps, and pond edging, she used weathered brick arranged in circular patterns, its faded color echoing the terra-cotta of the house's tiled roof.

Her plant selection reflected many influences. Panella absorbed strong gardening genes, and her wish list was long and varied. From her English grandmother, who had a well-tended flower garden, she developed a passion for roses. Her Italian father loved to garden as well, but more informally. He also had a pond and a fountain, which is how she learned to create and maintain her own. Over the years, she had become fascinated by succulents, too, so they found a place in her scheme. Local outdoor spaces can be used year-round in Southern California. "There is no such thing as a dormant

ABOVE: Sea lavender joins the fragrant, feathery leaves of Agave attenuata for dramatic contrast. Pink roses and bougainvillea add more vibrant color.

RIGHT: Under the backyard's white fence, a raised deck atop the garage overlooks the city below. The same red brick used in the backyard also laid in circular patterns under the low square. The pool wraps the deck rising. The stepped up part of the patio leads to the dining room.

OPPOSITE, TOP RIGHT: Bava's tall cactuses overhanging just like many succulents. It features a circular design, making it as solid as a concrete post.



the garden plan

A vine-draped railing, arching the agave, stops the garage so that the view to the cityscape below, while a circular fountain and pond anchor the backyard. Just behind the house, agave forms a seating area.





season here," says Pamela. As a result, she decided to focus on foliage, selecting plants with varying heights and silhouettes, and using them in dramatic combinations. Pairing two of these large specimens with masses of small plants adds depth and fullness to the garden, as when a large agave pertusa with low-growing sedums, which spread swiftly, producing masses of color.

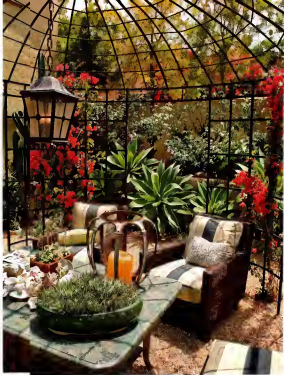
Though the plants behind the retaining walls look free-flowing, there is organization at work. A row of sunny agaves commands one side, and a row of 'Double Delight' roses the other; in between, they direct the eye to the seating area between them. The repetition also solves the problem of the plants' different irrigation needs. Under the roses, Pamela planted regularly spaced noble-seeders, a twister-father used to draw both birds and squirrels. Facing the agaves is wispy society garlic, chosen for its sharply contrasting texture.

Beyond the agaves and rose beds, trees and shrubs offer shade and help screen privacy. Pamela supplemented the garly olive trees already on the premises with a drought-tolerant South American silk-flow tree that produces large pink flowers in fall, in winter, when the leaves have

dropped, in striking spray with become even noticeable. *Colocasia esculenta*, a perennial favorite, also shows this space. To contrast with the succulents' strong, sculptural forms, she added soft-leaved, billowy rose mist low, which offers the bonus of attracting butterflies.

Finally, next to the stone wall at the rear of the garden, Pamela planted *Blechnum*, knowing the vine would, in time, cover the entire surface. Grass walls keep the focus inward, she says. "When you're in a garden, you want to feel removed from the world."

Although the landscape evolved from Westwood and enjoys a new garden, Pamela recalls that the appeal of this verdant oasis was most apparent when friends visited, strolling the paths to then perch on the low walls or wander to the front deck for its view of the city, eventually returning to the garden. "Everyone relaxed then," Pamela says. "No one wanted to leave." She remembers with delight the surprise visitors expressed on leaving the garden: was new. With its lush, full growth, it felt as if it must have evolved organically over decades, one guest observed. Says Pamela with a smile, "It's just the effect I had hoped for." ■



OPPOSITE Succulents and perennials combine to striking effect here. My blue succulent mixes with lavender sedums, and against the wall sculptural agaves take point with a single tree mallow shrub.

LEFT Jackson garden shows a view of the garden from the lower patio. Since long hemlock is used here to frame the view, the plant provides color in this sitting area without drawing bees.

before + after

Twice as nice

Doubling the size of the island and adding a banquette with two tables makes a kitchen welcoming to kids—and their teammates, too

BY HENI MALIKIN | PHOTOGRAPHS BY BRIANNE WILLIAMS
PRODUCED BY TISHA LEUNG

It's practically a law of physics: The bigger your kids get, the smaller your kitchen seems. Jon and Sarah Koomson of Charlotte, North Carolina, saw felt the squeeze in their 1980s brick Colonial. "Three kids, ages 10 to 15, all getting their own breakfasts, made rooming a traffic jam," says Sarah. Plus, since the gang is into sports, she adds, "We often host an entire team for dinner." On her wish list: extra storage, more seating, and room to lay out a big spread.

While a spacious 287-square-foot, the existing floor plan was awkward, with the work zone crisscrossed behind a small island at its narrowest and the table and chairs flooring in the wider bay-window area at the other end. So the Koomsons turned to designer Ally Whalen to come up with a solution. Her idea: Swap the dining and food-prep zones to allow a dining island more than twice the size of its predecessor and an L-shaped banquette in the opposite corner to host a crowd.

"Flipping the space meant raising new plumbing and electrical, but it was worth it," says Sarah. "The flow is so much better now." The new cabinetry plus peeked dish and glassware storage in the island, a pull-out pantry next to the fridge, a dedicated spot for Sarah's smoothie blender, and even a built-in bed for the family dog. "The kitchen now has a place for everything and everyone," she says, of a space that can easily accommodate up to 15. The family is so easy about the redo, they eat all their meals in the kitchen. And the dining room? "We rarely used it," Sarah says, "so we put a pool table in there!"



BEFORE A cozy kitchen the island took up valuable real estate, and upper cabinets really cramped in the nooks and crannies

AFTER The prep and cleanup zone now occupies the wider end of the space, leaving plenty of room for an oversized island. Charcoal-painted cabinets, brass marble quartz countertops, and bright yellow diners' stools give the renovated kitchen updated appeal

Family friendly

Jan and Sarah Kammerl wanted a modern large enough to show meals with their kids. Erin Louise, Nathan, and Taber, a family of five for the 85 sq ft midtown town, available, 60x47 inch walnut board, which makes a seating area for the kids. The island is a central area for the kids. Quartz countertop. Santa Monica Island. Island. 1924

**The long view**

A wallpaper with a red and white pattern behind the island's gray and white built-in bench gives the bar a modern look. The island is a central area for the kids. Quartz countertop. Santa Monica Island. Island. 1924

Clutter buster

To keep the island clutter-free, the built-in bench has a built-in storage area for the kids. Each bench has a built-in storage area for the kids. Quartz countertop. Santa Monica Island. Island. 1924



Woodboard on the back and panel details below give the bar a modern look.

Casual corner

For seating flexibility when the kids are in the room, the bar is served by two small tables that can also act as a desk. The L-shaped bench includes built-in storage on the left and flip-up tops on the right to hold table linens and large serving pieces. The bar is a central area for the kids. Quartz countertop. Santa Monica Island. Island. 1924

before

The workspace felt tight, while the eating area wasted square footage

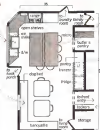


after

Swapping zones improves the footprint's flow and function

1. Moved the food prep area to the rear and the main kitchen area to the front. Exchanged three windows for a large one over the new sink and moved the island to the window where the range now sits.

2. Added a big L-shaped bar with two tables where the work zone had been and sliding barn-door style shutters on the window.



3. Relocated the island to the rear prep and dining area, creating a much larger area with seating for five and storage.

4. Turned a large table used as a desk into a pull-out counter, a table, and a built-in desk.

5. Replaced a bench around the corner with a built-in bench and a message table.

They Bought the Farmhouse

And the barn along with it.
Two old-house lovers resurrect a couple of 19th-century relics to create a gathering spot for family and friends

by Deborah Baldwin photographs by Gridley + Graves
produced by Tisha Leung styling by Anna Molvik



ABOVE Meet four renovators with an eye for antiques: Shelly Kennedy String, who runs her own art and home-decor studio; her husband, Mike, who works in marketing and designed the house; the couple's two-year-old daughter, Chloe, 36, a former Gap art director; and son, Josh, 27, an amateur Montessori teacher.

RIGHT The family discovered the mid-19th-century barn here behind the house and turned it into a party space.



Some projects quickly fade from memory, while others remain so fresh they can be summoned by two choice words: "Oyster crackers," says builder Lloyd Bennett, recalling his crew's shorthand for work on a certain farmhouse. "We had 'em in our tool belts for months after."

Not the edible ones—the little porcelain hats used for floors. Bennett and his crew spent days trimming and laying them in Marc and Shelly Kennedy String's kitchen, where they joined a chunky hatch as signposts of period style. "Shelly's very artistic—the best to make 'rags' with wings of black and red in the middle of white," Bennett continues. "It was tricky for sure, especially on an old, lumpy house."

Something out jumps is something of an association for the couple, who tackled their first house, a 1912 brick bungalow in Chicago, both out of an school while working *The Old House* and raising two young kids. After moving to Shelly's hometown, Shawsheen ("skinner side"), in New York's Finger Lakes region, they fixed up a 1930s house and a smaller, pre-World War number that became Shelly's studio.

Then, four years ago, the two got serious

LEFT The family's updated 3000 Square Feet.

and dove into their biggest project so far: converting a four-bedroom, three-and-a-half-bath place into a more compact, more comfortable home—while cranking out its semi-finished rooms and picking up with family and friends in a derby barn.

The house, which sits on land originally parceled out to Revolutionary War veterans, came down through four generations before doing a stint as a B&B. “Because I grew up in the area, I had loved the house my entire life,” says Shelly. Mark adds, “It was a classic old farmhouse with a great location, near Skaneateles Lake—everything we were looking for!” But it was priced too high, at least at first, and only after sitting idle for two years did it finally become theirs.

The house came with baggage: rooms engineered to accommodate overnighters, an unfinished, unattached wing, lot of floral wallpaper. But people looked at much of the old pine flooring and woodwork was intact, and that instantly struck Shelly’s eye. Then there was the even older barn, a big, faded red emblem of early America—barn’s last once you got past the fact that it showed every one of its 144 years.

Just across an asphalt path, not always visible! As soon as Mark and Shelly had dispatched a few mass eels around the house, they trained their eyes on the risky 30-by-60-foot structure behind it. Built into a hillside so livestock could enter the lower level at one end while hay was delivered upstairs at the other, the so-called bank barn was now a quest for structural and roosting downs.

To save it, they realized, they would have



ABOVE RIGHT: The original ceiling-height bulbs in the dining room were replaced by modern pendant lights and three columns. The new champagne-colored linens, similar to those worn by the owners and their son, are a basic tan “rug.” Floor tile: Metro Tile. Refrigerator and freezer: Frigidaire.

BELOW RIGHT: Warm white walls between the kitchen and the original woodwork and flooring in the dining room. Paint: Swilling. Farrow & Ball’s Windsor White. Chandelier: Modern Rustic. Side table: Williams-Sonoma. Chandelier: Modern Rustic. Side table: Williams-Sonoma. Chandelier: Modern Rustic.

OPPOSITE: The ladies’ parlor, which lost the 18th-century, double as an entrance room. Red circle: yellow. Fire: Fire.



Floor Plans

A new story addition and a new story layout added 500 square feet to the 3,800 square foot 18th-century house. Below: Walls came down to enlarge and open up the kitchen, and bedrooms and baths were reconfigured on second floor. The attic, not shown, was also reconfigured.



PHOTO: JAMES HARRIS



to demolish it. Marc spent that first summer pulling up the floorboards and organizing them in piles. A crew took off the siding, banded by board, leaving a skeleton, then lifted one of the end walls with a crane and put it aside. "We wanted to keep it as close to the original as possible on the inside because there were hand-hewn timbers," Shelly says. The roof had to be peeled off, and a third of the barn was so damaged it had to be chopped out of the middle and studied.

Now, how to make the two ends meet?

The barn crew picked up the frame, balanced it in skidding, and kept that loose wall dangling long enough to pour a 30-by-40-foot foundation and reinforce the below-grade sections of wall. Then the designer was dispatched into an new phase.

The floorboards were good, but underneath "wasn't far off," Bennett says. "Half logs, dimensional lumber, a lot of add-ons over the years, put together poorly." Joins and subflooring were in, Marc put back the



ABOVE: The new master suite includes an open dressing area with ceiling-high built-ins.

LEFT: The existing bathroom kept its original look but was gutted, and the floor. The homeowners stripped back wallpaper off the upper walls and replaced the fabric in the shower/bathtub.



MIRACLE BARN MAKEOVERS Find the charm of the original with built-in benches at breakfast nook.

floorboards, and the siding went back up. When they were done, it looked as if nothing had happened, though a shiny new standing-seam roof was in of a given.

Back to the house, then a entry, polished by all over the most formal front, opened up into a kitchen with 1980s fixtures and no room for entrance. "Shells would pile up, there was no place to sit, no room, and no room left for anything," Shelly says.

Then's when thinking the barn delivered a new payoff. Because the land is a Pribor's throw from the lake, there are some water management rules on how much can be made impermeable. Less barn means the couple could now permit for more house. They drew up plans for a two-story rear addition plus a one-story hangout to enlarge the kitchen.

With adjacent outdoor space attached as well, the kitchen is now a cook's haven, with a separate range and triple-basin sink strung in out of a commercial kitchen. (Please chef Marc doesn't fool around. Last year, with daughter Chloe's help, he placed in the top 10 in a national professional home competition.) The outdoor hatch will hold a coat, but it's been joined by a 12-foot island, the floor beneath it beaded up to handle the weight of its loaded marble top.

Previous owners had updated the plumbing and electricity, but now additions came on in force of sound, forced-air heat. Also lost to the house's HVAC history was an out-of-control chimney, which the crew hauled away in 5-gallon buckets—or rather, get-to-gether, Bennett says assembly, "out every window that we could throw it out of."

Options, the couple realized two baths while adding a master suite and turning a bedroom into a laundry room. The street-facing side of the house stayed as it always was, with bedrooms stacked over twin porches. "We call one the ladies' parlor and the other the whiskey room," says Shelly.

Not that friends and family deplore by grade, age, or income. More trees, Marc notes, you'll find everywhere in the kitchen. Loaded over by that ancient herb and made accommodating by the new island, it's now equal parts period-funk and modern-day-functional—just as the new owners planned it. ■

Timberrrrr!

The 1866 bank barn was headed for a salvaged-lumber dealer before the new owners took pity. To save it, crews stripped off the roof, chopped down the middle, hoisted up the frame, and poured a new foundation.



Back in the day, the work provided by local folk kept the barn alive from flooding and cracking. Says homeowner Marc, who helped oversee restoration: ABOVE LEFT: The pouring of a new concrete foundation and below-grade walls, after building the capsoil-free reinforced window. It's a chimney. ABOVE RIGHT: Lifting the barn. BELOW: Converted into a party space, the barn still sports its original siding. At its beauty, says homeowner Shelly, that off-season "the crowd flows in."



ALL
ABOUT

Ceiling Fans

These air movers keep you cool and look cool doing it. Here's how to choose a model that's right for your space. BY LOUIS HADJIS

THE GENIUS IDEA hasn't changed since the invention of the electric ceiling fan in 1887. When temperatures climb, just yank a chain, flick a switch, or point a remote and feel instant relief as a breeze wafts down from above. Fans don't alter the temperature, but they do sap body heat by making moisture evaporate, turning sticky perspiration into a coolant. All this for not much money up front and only pennies to operate.

Even better are the savings on air-conditioning costs. By themselves, ceiling fans will keep you comfortable at temperatures reaching into the 80s, so you won't need to use your AC system as often. And when the AC is running, a spinning ceiling fan will let you crank up the thermostat by 4 degrees—and knock 10 percent off your electric bill.

While their chilling effect has remained constant, the fans themselves certainly have not. New blade shapes and improved motors move air more efficiently than ever, and smart controls calibrate speeds with greater precision. Then there's the proliferation of styles, which makes it easy to find a fan that suits your decor. Before you resort to grabbing the first one that catches your eye, here's what to look for.

ANATOMY OF A CEILING FAN



VITALS

DIY OR HIRE A PRO?
It's not hard to swing in a replacement ceiling fan, but if your house has to be rewired or needs additional work on the ceiling is higher than 10 feet, you probably need an electrician.



HOW MUCH DO THEY COST?

Fans \$100 to \$3,000, depending on size and design; the lowest cost is \$105 for a \$400.

HOW LONG DO THEY LAST?

Fans only need repairs beyond connecting a remote or replacing blades damaged by moisture. Most manufacturers offer a 10-year warranty on the motor and a year on the other parts.

WHERE TO BUY?
A home center may have what you need left for the best choice at the lowest end of the higher end by a lighting showroom. Either way, ask about options by reading online.

The include-looking model has all-weather bronze finish and rugged plastic blades; its integrated light has seven cupped, Shown: \$229. www.homedepot.com

Getting the right fit

For the best breeze, avoid hanging the fan too tight to the ceiling or too far from the floor



CALCULATOR

Use this formula to find the optimal fan size for a room's occupied space—the part of the room where people linger. Step down a bit for rooms with low ceilings, and go wider if ceilings are high.



Showroom checklist

What to look for while you shop

MOTOR > While AC motors are the norm, newer (and pricier) DC motors offer up to seven speeds and save up to 70 percent on electricity.

BUILD > Watch out for unusual blades that can't be replaced and for post-burn halogens, which can be difficult to find (and

no handle). Screw-in LED bulbs up electricity and should last far years. Keep in mind that not all LEDs are dimmable.

BLADE MATERIAL > When it's bamboo, wood-composite blades can droop like a wilted flower. Opt for solid wood, metal, or plastic.

ENERGY STAR LABEL > The blue logo means the fan passed quality and efficiency tests and can move at least 5,000 cfm at 73 cfm per watt. Put another way, it costs less than a penny per hour to operate (LED light included), at 13 cents per kilowatt hour.*

*Measuring cost of electricity: 12¢/kWh @ .05¢/kWh.

HOW MUCH AIR DOES IT MOVE?

Efficacy is all about cfm, not the number of blades

Once you've calculated the ideal blade span for your space, start shopping for a fan with an appealing style and price. But also make sure that the cubic feet of air it moves per minute (cfm), measured at high speed, is near the top of its class. Some 52-inch fans, for instance, rate as low as 2,000 cfm, while others reach 7,000.

High-cfm fans not only provide a better breeze, they usually have robust motors that will last longer and run quieter than their more anemic counterparts. Don't worry about it feeling too drafty; you can always switch to a lower speed.

To find and compare fans' cfm, check online retailers like Hansen Wholesale (hansenwholesale.com).

WHEN TO DOUBLE UP

How to handle rooms that are long and narrow? When they're about twice as long as they are wide, divide in half and install two smaller fans, evenly spaced, for a balanced look as well as best performance.

Choose your style

There are sleek, fanciful, and barely-there options to suit any space

1 > TRADITIONAL An understated motor housing and four or five flat blades define the look of ceiling fans made during the first half of the 20th century. Shown: 56-inch Aquatic Antique. Finished with light oak, \$454, quorumblenders.com

2 > DUAL-HEAD Displaying two small blades (one usually in control) only assures that each corner of the room is treated to an ambient breeze. Shown: Mike Amityre. \$630, windgroup.net

3 > ART DECO Sleek nickel accents give this fan a sleek, modernistic look. Shown: 52-inch Phoenix. \$438, modernfans.com

4 > TRANSPARENT Whether sporting an RFL clear glass or plastic blades, virtually transparent fans make two three-blade units of nearly unobtrusive polycarbonate. Shown: 58-inch Airmax. \$580, windgroup.net

5 > CEILING HUGGER With blades just 4 inches below the ceiling, this style helps maintain headroom, but does sacrifice some performance. Shown: 46-inch Coast Hill. \$180, lampsplus.com

6 > BELT-DRIVEN For a truly vintage look, blades are supported from the motor and turned via belt-and-pulley system. Can be configured so that one motor drives multiple fans. Shown: 56-inch Newstead with two fans. \$2,880, lampsplus.com



PHOTOGRAPHS BY JEFFREY M. HARRIS; FAN 1: QUORUM BLENDERS; FAN 2: WIND GROUP; FAN 3: MODERN FANS; FAN 4: WIND GROUP; FAN 5: WIND GROUP; FAN 6: LAMPS PLUS



WHAT'S WITH THOSE CURVY BLADES?

Their aerodynamic shape from base to tip, as seen at left, maximizes air movement as it minimizes the power-robbing turbulence that cuts into fan efficiency. Because these sculpted blades do more work with less effort, they manage just fine with a smaller motor. Fans with flat blades can be efficient, too, but won't match the high efficiency performance of these blades' unique design.

Slippery bamboo blades, paired with an energy-efficient DC motor, make an impressive A/E after purchase with all-speed. Shown: 58-inch H Series. bunnings.com

PRO ADVICE

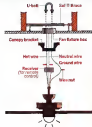
If you decide to DIY

Get a beefy fan box and find the framing where it will be attached.

GET A FAN FUTURE BOX ▶ This type of junction box, which safely encases the wiring, uses a heavier gauge metal than the ones for most light fixtures and can thus handle the extra weight of a ceiling fan.

SECURE IT TO A JOIST ▶ A fan box must be firmly attached to the house's framing. Fasten it directly to a joist or rafter using deck screws (never brittle drywall screws), or hang it from a Stud-Fix (shown here), which fits between joists with its ends anchored into their faces.

WIRING ▶ If duct power running to the right spot, connecting the wires is straightforward. Make sure to cap each wire and tightly seal the correct size wire nut and tuck them neatly into the fan box. If there's no wiring at the ceiling, hire a pro—after seeing how it should be done at the do-it-yourself class here is less.



When replacing a ceiling fixture with a fan and light combo, get one with remote, as shown above. Then you can control the fan and light separately without having to fiddle with the switch.



Apps like SimpleConnect from Hunter F&S put control of your ceiling fan and its light on your smartphone.

SPIN CONTROL

The pull chain is passé. Here are a few newer ways to take charge of your fan.

▶ USE A REMOTE Most manufacturers offer optional line-of-sight remotes, which let you adjust the breeze—and the light—without getting out of bed.

▶ UPGRADE THE SWITCH A dimmer like Lutron's Maestro allows seven-speed settings—more than most fan models provide—so you can dial in a custom comfort level.

▶ GET AN APP Hunter's SimpleConnect and Fanimation's FanSync let you control many make or number of fans remotely—as well as set schedules and program sleep timers—via your smartphone.

▶ SPRING FOR A MOTION SENSOR The Hailu fan, above left, can be equipped to turn on automatically when you enter the room and off when you leave. That means less waste—and less energy spent nagging if it does.



Ceiling fans in a pergola must be UL-Listed for use in wet locations. Shown: 60-inch Connect Pro. www.hunterfans.com

Take it outside

Make sure the fan can stand up to the elements and move lots of air.

When a summer air turns still, a man-made breeze on a porch or patio provides welcome cooling and may even blow away mosquitoes. Just choose a fan that has been certified by Underwriters Laboratories (UL) as suitable for outdoor use. These fans, also known as overhead patio fans, have sealed motor housings and electrical components able to withstand humidity and moisture. They come in two types: those certified for damp but sheltered locations such as porches, garages, and basements, and those certified for wet, exposed locations, such as decks, pergolas, and patios. Note that outdoor fans must move higher volumes of air than indoor models—at least 6,000 cfm. To keep bugs away, go for at least 8,000 cfm. In coastal areas, look for ABS plastic blades and noncorrosive plastic or marine-grade stainless-steel housings that will weather salt air.

CARE AND CLEANING

Dust buildup cuts down on efficiency and may cause wobbling.

- ▶ PUT AWAY THE 3-IN-ONE OIL** While vintage fans do require a few drops of oil to keep bearings quiet, modern fans have sealed bearings making lubrication unnecessary.
- ▶ DUST** Every three months or so, wipe the blades with a dampened microfiber cloth or a duster, like the one shown above.
- ▶ DEGREASE** A fan near a cooking zone attracts oily residues, which dust adhere. Once a month, spray the blades with a product like Seventh Generation Multi-Surface Cleaner.
- ▶ STABILIZE** If dusting doesn't cure a wobbling fan, try rebalancing it by carefully adding tin weights to the blades. To see how that's done, go to thisdihouse.com/fan-weights.

Unger's phoning Click-and-Go! dustbrush cleaner looks at an angle. www.ungers.com

Power-saving tips

It's hot out—so conserve your energy.

- TURNUPTHE AC TEMP** ▶ When a ceiling fan operates in an air-conditioned space, you can set the thermostat up to 4 degrees higher without any loss of comfort, and enjoy lower electricity bills to boot.
- REVERSE IT IN WINTER** ▶ An indoor breeze in warm weather is delightful; in cold weather, not so much. But ceiling fans still perform a useful function during the heating season by moving the warm air that rises to the ceiling, with colder air near the floor. To avoid notice the draft, reverse the motor so blades spin clockwise. Set the speed at low to gently push warm air across the ceiling and down along the walls.
- TURNUPTHE OFF** ▶ A fan's cooling action works only when you feel its breeze, spinning blades don't cool the air or the room. So save energy by letting the OFF switch when you leave a room—like you do with the lights, right? ■

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save This Old House

PRICE \$450,000

LOCATION Housatonic Falls, New York
 OWNER Edward Rosenberg
 362-399-0054, eprattmatt@gmail.com

THE HISTORY As the founder of the Wood Mowing and Shaping Machine Company in 1894, Walter Wood oversaw the manufacture of some of the finest farm equipment in the Northeast. And as the owner of renowned Wood Farm, he maintained a pristine, 400-acre dairy farm—one of the first to produce milk in a certified sanitary condition. Eventually Wood Farm milk would be shipped daily to New York City, nearly 200 miles away. Walter Wood built a large cluster of cottages for his farmworkers, including this Gothic Revival. After the farm ceased production in 1892, the cottage traded hands a number of times.

WHY SAVE IT? The house is currently a brick- and stone-encased in desperate need of renovation. The exterior retains its original Gothic Revival architecture (like fretwork on the gable end, arched windows, and the original porch). Inside are heart-pine floors, six-paneled doors, and several windowed bays.

WHAT IT NEEDS The 2,536-square-foot house is structurally sound with intact systems. The roof, as well as the use of the freestanding garage, should be replaced. The kitchen and bathroom need cosmetic updates.

Housatonic Falls is a charming town of about 3,500, located just 30 miles from Bennington, Vermont. It has a rich past and an active group of preservation-minded locals who congregate regularly at the town historical society, which commemorates its rich right next door to its gem on Main Street. —PAUL HOPE



1. The four-bedroom, one-bath house sits on a quarter-acre lot with a garden and a swimming pool. The house and garden are set back along the gable end.
2. The original staircase retains its heart-pine floors and six-paneled doors.
3. The house features heart-pine floors, six-paneled doors, and heart-pine ceilings and woodwork.
4. A large bay window looks into the dining room. The bay window is likely added around 1900—mark the entry to the living room.



GOT A HOUSE?

If you own an old house, call David Housatonic Falls, New York, 362-399-0054 or visit www.thisoldhouse.com or www.thisoldhouse.com for more information.

PHOTOS: COURTESY OF EDWARD ROSENBERG

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